



Species of Management Concern

BCTS TSK



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Bald Eagle (*Haliaeetus leucocephalus*)



Description:

- Large powerful raptor.
- Characterized by the white head and tail at maturity.
- Adults have black body that contrasts with the white head and tail.
- Can reach one meter tall at maturity.
- Wingspan of two meters.
- Large yellow bill.
- Female is larger than male.
- Immature eagles are mostly dark for one to two years before white begins to appear.
- Time to maturity approximately four years, can vary.



Photo Credit: Miep Burgerjon.

Biology:

- Food consists of small birds, mammals and fish as well as scavenging carrion.
- Eagles mate for life, but will mate again if one mate dies.
- Nests are large stick structures, usually constructed on the top of large trees.
- There may be one or two alternate nests in the breeding territory.
- Nests can be constructed on cliffs if no suitable trees exist.
- One to three dull coloured eggs are laid.
- Incubation is approximately 35 days.
- Young fledge in 11 to 13 weeks.
- Susceptible to human disturbance.
- They will nest in urban areas where suitable habitat exists.

Phenology:

			Breeding	Parental Care							
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Habitat:

- Forested, riparian, marine and grassland habitats throughout British Columbia.
- Nesting and foraging activities are common near water.
- Higher populations occur near the Pacific Region near fjords, and estuaries.
- Some inland populations migrate to the Pacific Regions after freeze up.
- Prefer forested shorelines and waterways, lakes.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Bald Eagle (*Haliaeetus leucocephalus*)



Status:

- SARA Schedule: Not Listed.
- Provincial List: Yellow.
- Identified Wildlife: Yes.

BEC Zones:

- BAFA, BG, IDF, PP, CMA, CWH, ESSF, ICH, MH, BWBS, IMA, SBPS, SWB, CDF, MS.

Natural Resource District:

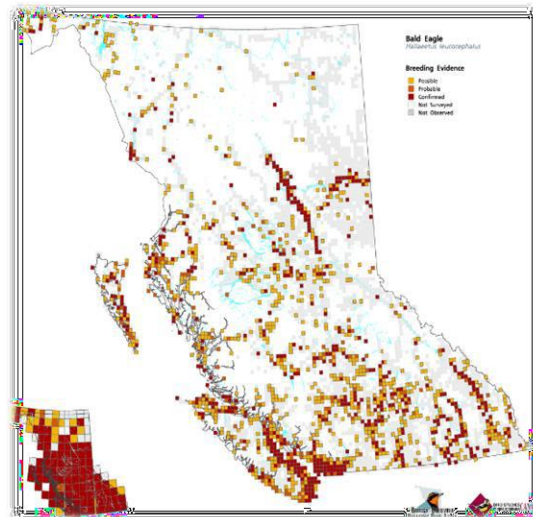
- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Haida Gwaii, Thompson Rivers, Rocky Mountains, Selkirk, One Hundred Mile House, Cascades, Sunshine Coast, Okanagan Shuswap, Ft. Nelson, Peace, Mackenzie, Prince George, North Island-Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Range:

- Bald Eagle is found throughout British Columbia, from valley bottoms to high elevations.
- Majority of birds are concentrated along the coast and inland stream habitats.
- Small numbers winter throughout coastal British Columbia.



Photo Credit: [inaturalist](#). Immature Bald Eagle.



Map Credit: [birdatlas](#)

Barn Swallow (*Hirundo rustica*)

Description:

- Medium sized songbird, about the size of a sparrow, 15-18cm length, 29-32cm wingspan.
- Back and tail distinctive iridescent blue, light brown or rust stomach, chestnut coloured throat and forehead.
- Distinctive long forked tail and pointed wings.
- Streamlined bodies, for acrobatic flight.
- Male and female similar size.
- Female not as brightly coloured and shorter tails.
- When perched they look conical due to flat short head, short neck, long body.

Biology:

- Aerial insectivore.
- Diet consists of feeding on beetles, bees, wasps, ants, butterflies, moths, and other flying insects.
- Usually take relatively large, single insects rather than feeding on swarms of smaller prey.
- Nests in barns or other buildings, under bridges, in caves or cliff crevices.
- Clutch size 3-7. Often 2 broods, except in far north.
- Incubation lasts 13-17 days, mainly or totally by female.
- Fledge at 18-23 days, stay together and are fed by parents for about a week.
- Females first breed at 1 year, males may remain unpaired until 2 years old.
- Adults often have same mate in successive years. Eggs are creamy or pinkish white, spotted with brown, lavender and gray.

Phenology:

Breeding, Fledging, Parental Care											
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: Miep Burgerjon

Habitat:

- Open grasslands, fields, over water, and open forest cutblocks where nesting habitat exists.
- Often found near water, can be small ponds.
- During breeding season these birds can be found at mud puddles sourcing mud for nest building.
- This is a long-distance migrating bird.
- Spending their summers in North America and their winters in Central or South America.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Barn Swallow (*Hirundo rustica*)

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- BAFA, BG, IDF, PP, CDF, CWH, ESSF, ICH, MH, BWBS, IMA, SBPS, SBS, SWB, MS.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Haida Gwaii, Thompson Rivers, Rocky Mountains, Selkirk, One Hundred Mile House, Cascades, Sunshine Coast, Okanagan Shuswap, Ft. Nelson, Peace, Mackenzie, Prince George, North Island-Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.



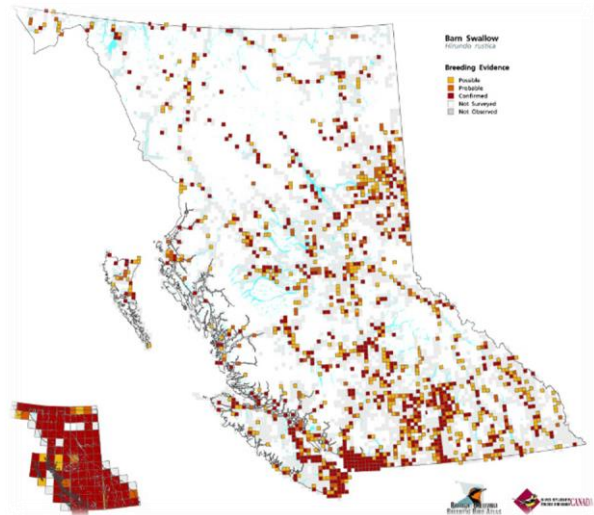
Photos Credit: [inaturalist](https://www.inaturalist.org)

Vocalization:

- https://www.allaboutbirds.org/guide/Barn_Swallow/sounds

Range:

- Barn Swallows are found throughout British Columbia.
- One of the most common widespread birds in British Columbia and the World, but is threatened by habitat loss, climate change/earlier Springs, and declining insect populations.
- Can be found from low elevations in open habitat to alpine meadows.



Map Credit: [birdatlas](https://www.birdatlas.org)

Black Bear (*Ursus americanus*)

Description:

- Not always black, can be cinnamon, brown, and blonde. White Kermode or Spirit Bear is on N-central coast and Blue “Glacier” Bear in British Columbia’s northwest.
- Small black eyes, broad head, rounded ears, short tail, fine, long fur.
- Prominent shoulder hump of grizzlies is absent and facial profile is straight rather than dish-shaped and claws are shorter
- Size and weight, varies greatly by sex, season, food supply, and locale.
- Adult males 60-90 cm in shoulder height and 130-190 cm long and weigh 80-300 kg. Females are smaller at 40-140 kg.
- Solitary life history.



Photo Credit: [Wildsafe BC](http://WildsafeBC)

Biology:

- Omnivorous, vegetation is about 80% of diet. Seek abundant food high in protein and energy and available with minimal energy expenditure.
- Mate early Jun–mid Jul but embryo does not implant until Oct–Nov with cubs born Jan–Feb during hibernation weighing about 400 g and nurse while mother hibernates.
- Cubs stay with mother for first year.
- Usual hibernation is 3-5 months on S coast and 5-7 months in the interior and northern. Females hibernate longer than males.
- Coastal dens in or under large trees, snags, logs, or stumps. May be 25 m above ground. Interior, in tree cavities, but can den in rock cavities, under-brush piles, or in holes dug into ground.

Habitat:

- Prefer forested and shrubby areas to open but use wet meadows, high tidelands, ridgetops, burned areas, riparian areas, and avalanche chutes.
- Home ranges (feeding areas joined by travel routes), males about 25-150 km² - larger than females’, 5-25 km².
- Home ranges may shift due to environmental factors and often overlap those of other bears.



Photo Credit: USDAFS

Phenology:

Hibernate										Hibernate	
Birth		Nursing			Fertilization				Implantation		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Black Bear (*Ursus americanus*)



Field Action Required:

- If observed, stop work in the immediate area until a biologist with experience with Black Bear surveys the area.
- If a potential den is observed, stop work. If safe to do so document the location of the den, take photos, and flag the den.
- Never approach a bear. If occupation status of den is unknown, stay away.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not Listed
- Provincial List: Yellow.
- Identified Wildlife: No.

BEC Zones:

- BAFA, BWBS, CDF, CMA, CWH, ESSF, ICH, IDF, IMA, MH, MS, SBPS, SBS, SWB.

Natural Resource District:

- Mackenzie, Prince George, Nadina, Skeena, Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountains, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, North Island – Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

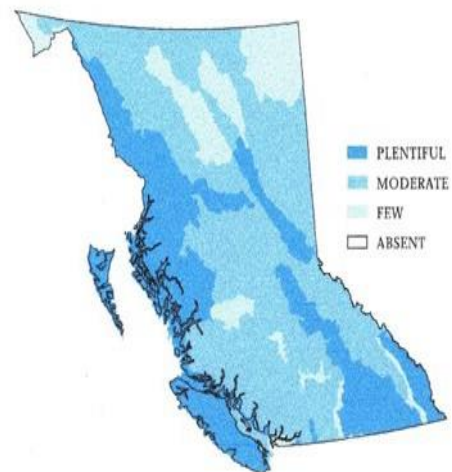
Range:

- Occupies most of BC.



Opening to
Bear Den under
tree root.

Photo Credit: Brian Gustafson



Map Credit: [BC Ministry of Environment](#)

Fisher - Boreal Population (*Pekania pennanti*) pop. 4

Description:

- Medium-sized carnivore.
- Long thin body characteristic of the weasel family and pointed faces, rounded ears, and short legs.
- Fur deep brown to black with lighter hairs around the face, neck, and considerable grizzling patterns around the shoulders and back.
- Females weigh 2-3 kg and measure 75-95 cm in length with the tail being about one-third of the length in both sexes.
- Males weigh 4-6 kg and 90-120 cm long.
- Tracks like mink and marten but larger.



Photo Credit: [inaturalist](https://www.inaturalist.org)

- Subspecies recent addition to conservation list (2020).

Biology:

- Single, undifferentiated species throughout their range with 2 BC populations.
- Solitary animals, interact with others during mating, territorial defense, or when raising young.
- Feeds on small to mid-sized prey, snowshoe hares, red squirrels, small rodents, grouse, birds, carrion, reptiles, amphibians, insects, and plants.
- Predators include cougar, lynx, bobcat, coyote, wolverine, other fisher, and golden eagle.
- High surface-to-volume ratio results in thermal constraints during winter.
- Mate in fall.
- 2-3 kits weigh 40-50 grams, born late Mar- early Apr, after delayed implanting.
- Natal dens always found in cavities of standing trees, generally broadleaves.
- Kits are blind, deaf, and have only a sparse covering of fine hair at birth and stay in the den for their first 8 weeks.

Habitat:

- Not numerous, vulnerable to habitat loss.
- Prefer old and mature forests, specifically riparian and dense wetland forests.
- Affinity for broadleaf stands, but conifer forests dominate most BC home ranges.
- Home range, little overlap with same sex, but male's range may overlap more than one female home range.
- Female home range - 30-50 km² while male home range - 100-200 km².
- Require movement habitat (tree and/or dense shrub cover) to safely travel between important habitats, and to access new areas when dispersing.
- Movement habitat is found in forested stands, total cover is greater than 50%.
- Cover does not need to be continuous, but openings more than 50 m wide create increased risk.

Phenology:

			Birth	Kit Care							Dispersal
	Implant		Fert								
Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Fisher - Boreal Population (*Pekania pennanti*) pop. 4



Photo Credit: [iNaturalist](#)

Field Action Required:

- Maintain structural attributes of old forest, such as large diameter trees, complex forest structure, and elevated large woody debris to meet life requisites
- Appropriate habitat management at landscape and stand scales (BC Fisher Habitat Web Module 2020).
- Document (photo, GPS coordinates) sighting of Fisher or den. Report to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not at Risk.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

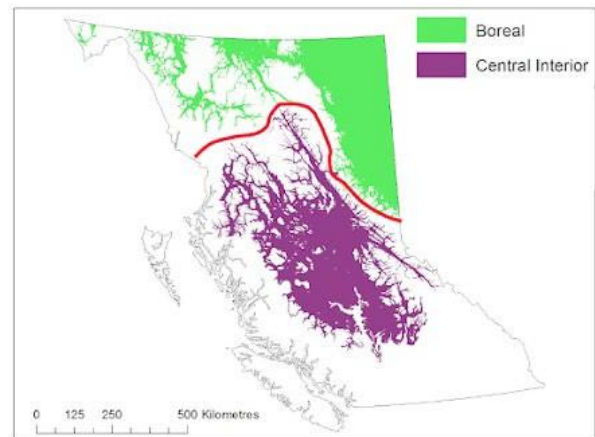
- BWBS, CWH, ESSF, ICH, MH, MS, SBPS, SBS, SWB, IDF.

Natural Resource District:

- Mackenzie, Prince George, Coast Mountains, Skeena, Stikine, Fort Nelson, Peace.

Range:

- Occur throughout northern BC, mainly east of Rocky Mountains.



Bottlebrush Frost (*Physconia detersa*)



BCTS
BC Timber Sales

Description:

- Bottlebrush Frost has a distinct white “frost” or powdery cover over the upper surface.
- Medium in size with a lobed, leaf like shape, cortex above and below, lobes appressed to loosely attached, elongate, averaging to 0.5–2 (–3) mm wide, thin.
- The upper surface of the lobes are brownish, except often heavily white-powder, dull to somewhat shiny.
- Lower surface of the lobe pale to more often blackish, dull, bearing numerous squarrose rhizines.
- Thallus (body of lichen) bearing soredia and/or isidia (reproductive parts). Soredia/isidia mostly confined to marginal soredia and do not reach lobe tips.
- *P. enteroxantha* is a similar species which is more heavily white-pruinose (covered in white powder). *P. detersa* also appears to have a strictly boreal distribution in BC unlike *P. enteroxantha*.

Biology:

- Bottlebrush Frost lichens reproduce both sexually, through spores, and asexually through vegetative reproduction.

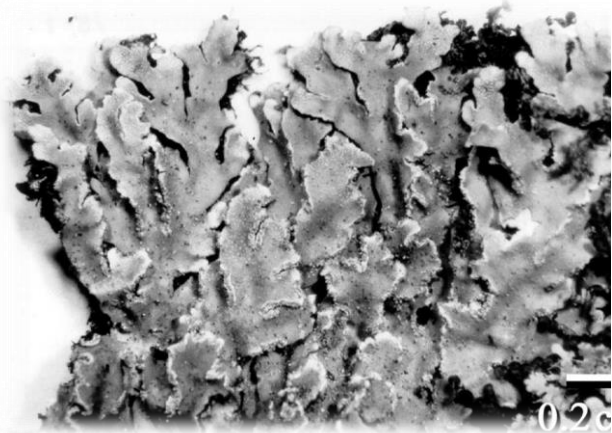


Photo Credit: T. Esslinger, [LichenPortal](#)

Habitat:

- Grows in places where there is little soil and are found on a variety of calcium-rich substrates, including rock surfaces, tree trunks, and on the ground.
- Found at lower elevations in boreal habitats.



Photo Credit: S. Sharnoff, [LichenPortal](#)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: T. McMullin, [LichenPortal](#)

Bottlebrush Frost (*Physconia detersa*)



Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

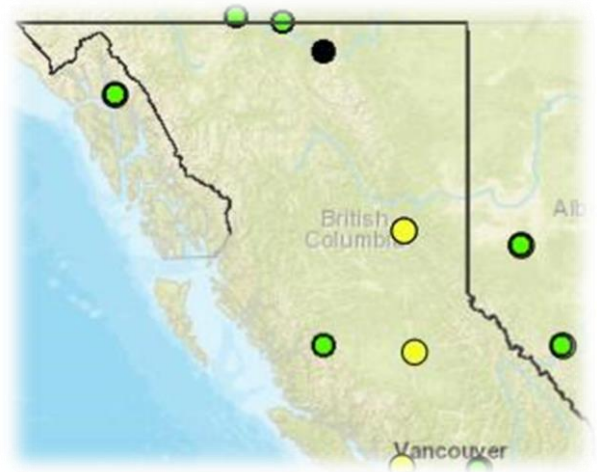
- BWBSdk

Natural Resource District:

- Ft Nelson, Peace, Mackenzie, Prince George, Coast Mountains, Skeena Stikine

Range:

- Found in boreal BC.
- North to Alaska, south to Colorado.



Map Credit: [E-Flora BC](#)

Bull Trout (*Salvelinus confluentus*)



Description:

- Long slender fish with a comparatively large head and jaws.
- Two distinct forms throughout range (resident, migratory).
- Migratory - migrates upstream to spawning areas in spring.
- Migratory - live in stream for several years before migrating downstream to larger river or lake. Spend several years there before returning to stream to spawn.
- Resident - occur in small headwater streams where their entire life is spent.
- Color, olive-green to blue-grey, with anadromous fish having silvery sides.
- Pale round pink, lilac, yellow-orange or red spots along flanks and backs distinguishing them from other species.
- Tail fin is slightly forked, and pelvic or anal fins may have a leading white edge.
- Body size at maturity depends on life history strategy, resident 15-30 cm and migratory 24-73 cm long.

Biology:

- Spawn mid Aug-late Oct with falling temperatures (5-9 °C). Southern populations, later spawning window.
- Eggs hatch late winter (Mar) onwards.
- Optimum incubation temperature 2-4 °C.
- Fry emerge from gravel Apr-May.
- Most juveniles move to larger rivers or lake by mid-summer. Others stay in spawning areas for 2-4 years.
- Voracious predators, eat other fish when available.
- Diet - terrestrial and aquatic insects, macro zooplankton, mysids, and fishes. Young diet - aquatic insects.
- Adults eat mainly fish, also small vertebrates (frogs, snakes, mice, ducklings).

Phenology:

												Incubate		
Hatch			Emergence				Spawning							
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			



Photo Credit: [Fisheries & Oceans Canada](https://www24.gov.bc.ca/fisheries/)

Habitat:

- Sensitive to disturbance, require relatively pristine habitat.
- Habitat that is cold, clean, complex, and connected.
- Bottom of deep pools in cold rivers and large tributary streams.
- Often in moderate to fast currents with temperatures of 7-10 °C. Also, cold lakes and reservoirs.
- Stable channel and stream flow, low levels of fine substrate sediments, high stream channel complexity with various cover types, temperature ≤ 15 °C and corridors for migration favor population persistence.
- Spawning - gravel riffles of small tributary streams, including lake inlet streams.
- CWD and rubble substrate important juvenile rearing habitat.
- Home range, highly variable depending on life history strategy.
- Resident - migrate short distances to spawning grounds, while migratory fish may travel up to or over 250 km.



Photo Credit: [US Fish & Wildlife Service](https://www.fishbase.org/)

Bull Trout (*Salvelinus confluentus*)



Field Action Required:

- If observed, stop work in the immediate area until a biologist with experience in fish ecology surveys the area.
- Take photos and record sighting's coordinates.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1-Special Concern
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

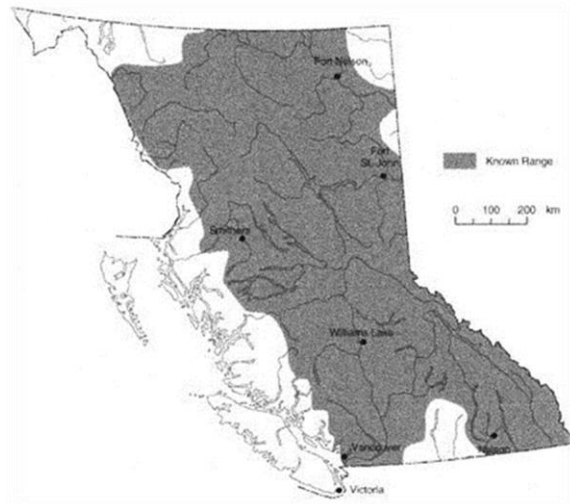
- BG, BWBS, CWH, ESSF, ICH, IDF, MS, PP, SBPS, SBS, SWB.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, Coast Mountains, Skeena Stikine, Stuart Nechako, Mackenzie, Prince George.

Range:

- Coastal and montane areas 49 to 60 degrees latitude.
- Every major mainland drainage on both sides of Continental Divide including coastal drainages penetrating Coast Mountains.
- Not on Vancouver Island, Haida Gwaii, other coastal areas, and western tributaries of Columbia River.



Map Credit: [BC Ministry of Environment](#)

Coastal Tailed Frog (*Ascaphus truei*)



Description:

- Coastal Tailed Frogs are small (40-50 mm snout-vent length) with a large head.
- The eyes of juveniles and adults have vertical pupils.
- Adult males possess a short, cone-shaped "tail," which functions as a copulatory organ during mating.
- Tadpoles have a flattened oral disc that produces a sucker-like mouth, which they use to attach to rocks in fast flowing water. The body is dorso-ventrally flattened, and the tail fin is low.
- Adults lack a tympanum (eardrum) and males do not call, which may be an adaptation to living within the constant noise of mountain streams.
- The Coastal Tailed Frog and Rocky Mountain Tailed Frog (*Ascaphus montanus*) were formerly considered as single species (*A. truei*) but are now recognized as two species based on genetic and ecological differences.
- Coastal Tailed Frogs lay eggs later than Rocky Mountain Tailed Frog, have smaller clutch sizes, shorter incubation periods and smaller hatching sizes.

Biology:

- Breeds in the fall with females laying 35 to 100 clear eggs in midsummer in small clusters attached to the undersides of rocks.
- Fertilization is internal; male has a tail-like copulatory organ. They are the only North American species that uses internal fertilization.
- It is not known how mates find each other. While adults are mainly active at night, they can sometimes be found out and about in daytime, particularly in damp, cool settings.
- Larval period lasts 2-4 years.
- May not breed until 7-8 years old or 6-8 years after metamorphosis.

- Development to adulthood is lengthy; tadpoles can take 1-4 years to metamorphose depending on geographical location and 7-8 years to reach sexual maturity.
- Tailed Frogs are the longest-living frogs in North America, estimated to live 15 years or more.

Phenology:

										Breeding	
			Metamorphose			Eggs		Hatch			
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: A. McEwan, [E-Flora BC](#)

Habitat:

- Clear, cold swift-moving mountain streams with coarse substrates. Primarily in older forest sites.
- May be found on land during wet weather near water in humid forests or in more open habitat.
- During dry weather stays on moist streambanks.

Field Action Required:

- If observed, stop work in the immediate area.
- Take photos and record sighting's coordinates.
- Report the observation to supervisor and contact BCTS.

Coastal Tailed Frog (*Ascaphus truei*)



Photo Credit: [iNaturalist](#)

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.



Photo Credit: [iNaturalist](#)

Status:

- SARA Schedule: 1-Special Concern (2003)
- Provincial List: Yellow
- Identified Wildlife: Yes

BEC Zones:

- CWH; ESSF; ICH; IDF; MH; MS

Natural Resource District:

- Nadina, Skeena Stikine, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, North Island - Central Coast, Coast Mountains, Campbell River, South Island

Range:

- Found in the Coast and Cascade Mountain Ranges in BC, from the Lower Mainland to the Nass River.
- South to northern California and north to the Alaskan panhandle.



Map Credit: [COSEWIC](#)

Common Nighthawk (*Chordeiles minor*)



Description:

- Medium sized bird of the nightjar family.
- Brownish body with yellowing on side of face and back of neck.
- Body with white spots on upperside, belly with narrow white horizontal bars.
- Dull yellow eye ring.
- Breeding males, white throat, large white wing patch, white terminal tail band.
- Breeding female, cream buff throat, mottled wing patch, no white wing patch, belly wide white horizontal barring.
- In flight notice the wide wing bars past the elbow of wing. Tail is slightly notched at the terminus.
- Distinctive by its long narrow pointed wings and wing bars.
- Length 22-24cm, wingspan 50-57cm.
- Difficult to locate on nests due to well camouflaged plumage.

Biology:

- Diet consists exclusively of flying insects, and flies.
- A crepuscular bird feeding while in flight, usually at dawn and dusk.
- Nests are located on open ground, gravel beaches, rocky outcrops, and open forest floors that match their plumage colouration.
- Have also been found in urban areas on gravel roofs and golf courses.
- Female selects nest site.
- Nests are not constructed but rather a location is selected.
- Clutch size 2, one to two broods.
- Eggs are creamy white to pale grey, speckled with grey, brown and black.
- Incubation by female lasts 16-20 days.
- Nestlings stay in nest 17-18 days.
- Mostly solitary except during migration when they flock together.

Phenology:

				Breeding		Fledging					
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: [Parks Canada](#)

Habitat:

- Semi open areas where flying insects are common.
- Cultivated fields, rangelands, farmlands, marshes, sloughs, large ponds, beaches, lakes, slow moving rivers, mixed open forests, estuaries, sand and gravel bars, rock outcrops, urban fields, golf courses, gravel and dirt roads, reclaimed sites, and early regenerating clearcuts, transmission lines and subalpine.
- Nests are usually close to the feeding habitat.
- Spend their summers in North America (mostly Canada) and their winters in South America.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Common Nighthawk (*Chordeiles minor*)



Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Yellow.
- Identified Wildlife: No.

BEC Zones:

- BG, BWBS, CDF, CWH, ESSF, ICH, IDF, MH, MS, PP, SBPS, SBS, SWB.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, Thompson Rivers, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, North Island-Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Vocalization:

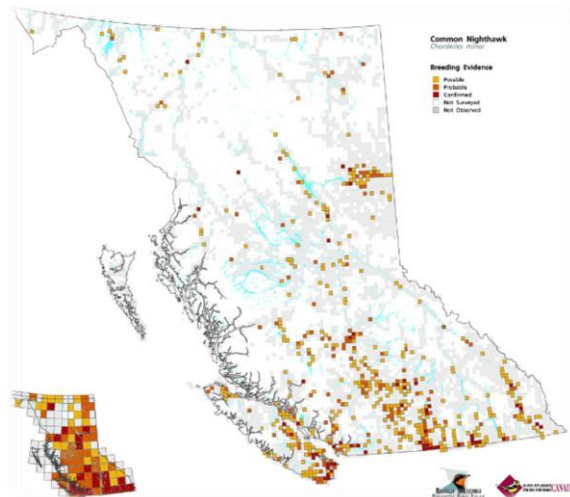
- https://www.allaboutbirds.org/guide/Common_Nighthawk/sounds

Range:

- Common Nighthawk is found throughout British Columbia.
- Less common in the northern latitudes and higher elevations.
- Considered a long distance migrate as some travels up to 11,000 km from Argentina.



Photos Credit: [Parks Canada](#)



Map Credit: [birdatlas](#)

Considerable Gingerbread (*Pannaria rubiginosa*)

Description:

- Considerable Gingerbread is a member of the group called the Mouse Lichens. This reflects the miniature size of the lobes and the dull greyish brown colour of the upper surface in many species.
- Minute to small or occasionally medium sized, and can vary in appearance with many small, leafy lobes, or a few lobes.
- May appear crust like.
- It has a cortex above but not below.
- Rarely pruinose (covered in powder on surface).
- Lobes closely appressed, subrotund to elongate, averaging to 1–3 mm wide, thin to thick.
- Upper surface pale tan to greyish blue or dark brownish (lobe margins often whiter), smooth to slightly roughened.
- Lower surface pale and often resting on dark hypothallus.
- Apothecia (fruiting body) located over upper surface, disc usually reddish brown; spores simple, ellipsoid to somewhat spindle shaped, colourless.



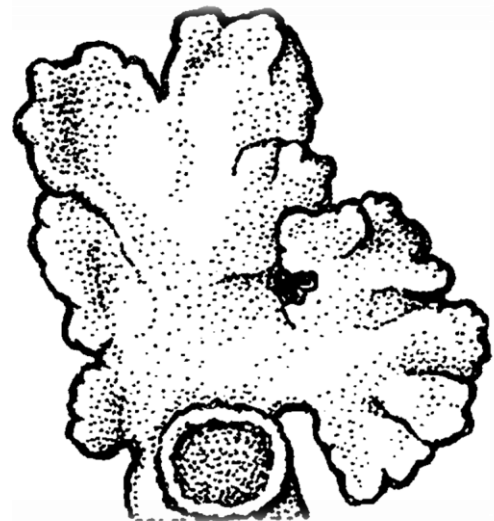
Photo Credit: J. Riley, [E-Flora BC](#)

Biology:

- Considerable Gingerbread lichens reproduce both sexually, through spores, and asexually through vegetative reproduction.

Habitat:

- Over conifers and sometimes rock, moss, and soil in open coastal forests at lower elevations.



Credit: [Lichens of British Columbia](#)

Considerable Gingerbread (*Pannaria rubiginosa*)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: [iNaturalist](#)

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHds; CWHvh; CWHwh; CWHxm

Natural Resource District:

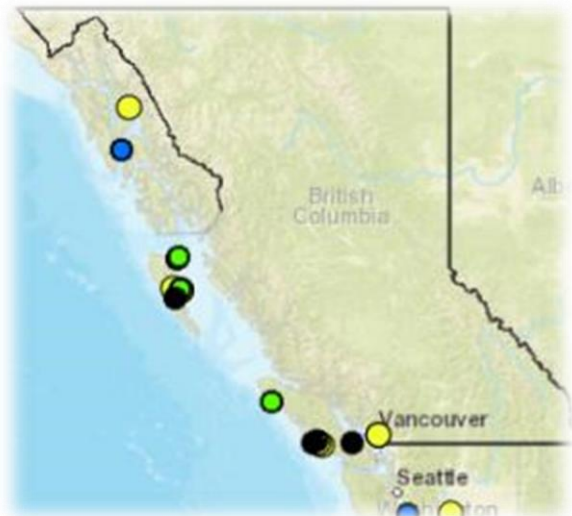
- Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, North Island - Central Coast, Coast Mountains, Skeena Stikine, Campbell River, South Island



Photo Credit: T. McMullin, [LichenPortal](#)

Range:

- In BC, found in coastal forests.
- South to New Mexico.



Map Credit: [E-Flora BC](#)

Cryptic Paw (*Nephroma occultum*)

Description:

- Cryptic Paw is part of the group called Paw Lichens, so named because of the brown, paw-like apothecia (the spore-producing sexual stage of reproduction) on the lower surface; in all other genera the apothecia are located over the upper surface or along the lobe margins.
- It has a yellowish, greenish, or bluish-grey upper surface with net-shaped ridges, and a hairless tan to sometimes blackish lower surface.
- It is commonly 2-7 cm broad and has rounded lobes 4-12 mm wide.
- It produces many asexual propagules, called soredia, along the margins and the ridges of the upper surface.
- Generally, apothecia are absent.

Biology:

- Cryptic paw produces large numbers of asexual soredia which are thought to be dispersed by wind, rain, and animals.
- The soredia of *N. occultum* are larger than those of most lichens, and poor propagule dispersal is a factor which limits distribution.
- Cryptic Paw generally does not have sexual structures (apothecia) and may have low genetic variation.
- This species is a poor competitor and is displaced by mosses or liverworts where these are the dominant epiphytes.
- Intolerant of summer drought.

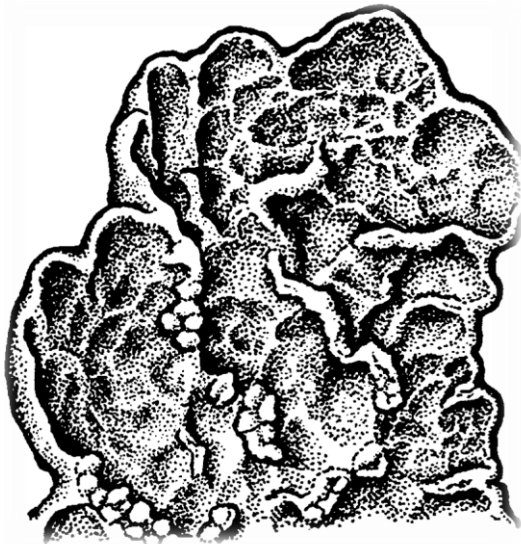


Photo Credit: J. Riley, [E-Flora BC](#)

Habitat:

- Infrequent over conifers in open old-growth maritime and intermontane forests at lower elevations.
- Moist forested regions at elevations below 1200 m, and most populations occur between 400 m and 800 m.
- Cryptic Paw inhabits the upper forest canopy of coastal ecosystems but is restricted to the lower forest canopy in inland localities where humidity is maintained throughout the summer by shading and by moisture retention from older trees and associated vegetation.
- Grows in forests which receive at least 75 mm of precipitation during the summer months, and which have nutrient-rich soils, typically with toe-slope topography where soils are enhanced by moisture and nutrient addition.

Cryptic Paw (*Nephroma occultum*)



Credit: [Lichens of British Columbia](#)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: [iNaturalist](#)

Status:

- SARA Schedule: 1-Special Concern (2007)
- Provincial List: Blue
- Identified Wildlife: No

BEC Zones:

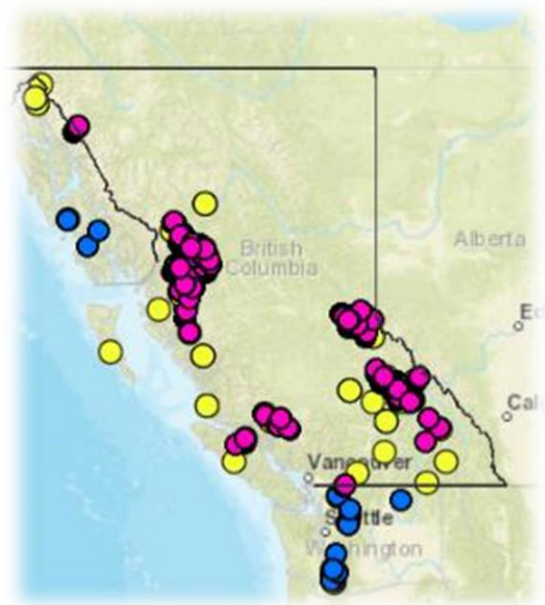
- BAFAun; CWHds; CWHvm; CWHxm; ESSFwcp; ESSFwvp; ICHmc; ICHvk; ICHwk; MHmm; SBSvk

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Ft Nelson, Peace, Mackenzie, Prince George, North Island - Central Coast, Coast Mountains, Skeena Stikine, Campbell River, South Island

Range:

- Coastal and inland rainforests in BC.
- South to Oregon.



Map Credit: [E-Flora BC](#)

Cutthroat Trout (*Oncorhynchus clarkii clarkii*) Subspecies *clarkii*



Description:

- Most widely distributed and abundant subspecies.
- Migratory and non-migratory stocks occur throughout the range.
- Three major life history form populations, sea-run, freshwater-resident (lacustrine and fluvial) and headwater streams.
- Colour varies, dark green to greenish-blue on back, olive-green on upper flank, silvery on lower flank and belly.
- Irregular spots on dorsal, adipose and caudal fins and anal, pectoral and pelvic fin bases. Gill covers are pinkish.
- At sea or recent migrants to freshwater, silvery with a bluish back, yellowish lower flanks and fins, and sparse spots.
- Adult weight variable: sea run, 900-2300 grams; stream resident juveniles, 11-91 grams; lake adults, smaller than sea run.



Photo Credit: [South Coast Conservation Program](#)

Biology:

- Spawn, late winter, or early spring (Jan-May). Peak in Feb with water temperature > 6-8 °C.
- Spawn in streams on clean, small gravel substrates.
- Eggs hatch, 6-7 weeks, hatchlings (fry) emerge from gravel (Mar-Jun) in 1-2 weeks with Apr peak.
- Sea-run trout migrate to salt water in late spring or early summer at age 2 or 3.
- Adults eat insects, crustaceans, and other fishes.
- Young feed on aquatic and drift insects, microcrustaceans, and some small fish.

Phenology:

					Emergence							
		Hatch										
Spawn												
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	

Habitat:

- Large variety of habitat types - lower and upper reaches of large or small river systems, estuaries, sloughs, ponds, lakes, and nearshore ocean waters.
- Small, low gradient coastal streams and estuaries.
- Freshwater, prefer deeper pool habitat and cover formed by CWD.
- Well-shaded streams with water temperatures < 18 °C.
- Lake populations require access to gravel-bottomed streams to be self-sustaining.
- Spend more time in freshwater environment than most other anadromous Pacific salmonids.
- Brief period offshore during summer, returning to freshwater by fall-winter.
- Migratory form does not overwinter in the ocean.
- Marine habitats, remain close to coast, usually within estuary (within 10 km of land).
- Some may spend entire life in freshwater (many in lakes), but most are anadromous (summer in saltwater).
- Typically, does not occur farther inland than 150 km.

Cutthroat Trout (*Oncorhynchus clarkii clarkii*) Subspecies *clarkii*



Photo Credit: [iNaturalist](#)

Field Action Required:

- If observed, stop work in the immediate area until a biologist with experience in fish ecology surveys the area.
- Take photos and record sighting's coordinates.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not listed
- Provincial List: Blue.
- Identified Wildlife: No

BEC Zones:

- BWBS, CDF, CWH, ICH, SBS.

Natural Resource District:

- Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, North Island - Central Coast, Coast Mountains, Nadina, Skeena Stikine, Campbell River, South Island.

Range:

- Broadly distributed throughout coastal BC.



Map 45 The B.C. distribution of coastal cutthroat trout (*Oncorhynchus clarkii clarkii*)

Map Credit: [E Fauna BC Atlas](#)

Electrified Millepede (*Anaptychia crinalis*)



BCTS
BC Timber Sales

Description:

- Electrified Millepede is a small leaf-like lobed lichen with narrow, linear, intertwined smaller lobes that have obvious marginal cilia (short hairs), no cortex (bark-like surface) on the lower surface, and apothecia (the spore-producing sexual stage of reproduction) which has small spiny margins.
- The thallus (body of lichen) is 4-8 cm wide, whitish gray, occasionally grayish brown to brown, upper surface matte, smooth or with some tiny hairs (tomentum).
- Lobes elongate to linear, up to 8 cm long and 0.1-0.6 mm wide, attached at the base of the lobe, mostly dichotomously branched, and tangled.
- Lower surface of lobes flat or channeled, mostly lacking a cortex and exposing the white medulla (horizontal layer of thallus).
- The apothecia are near the tips of branches, sparse to frequent, 2-4.5 mm in diameter, stalked, the disc dark brown, flat to concave, the margins nearly entire to toothed or spinulose.
- For many years *A. setifera* and *A. ciliaris* have been confused with *A. crinalis* and recently have been determined not to occur in North America.
- *A. ulotrichoides* is similar but has few or no marginal cilia and grows on rock.

Biology:

- Electrified Millepede reproduces asexually, usually by dispersal of fragments of the lichen body.



Photo Credit: [iNaturalist](#)

Habitat:

- In the Pacific Northwest, on the bark of conifer trees (*Picea*, *Pinus*, *Thuja*).



Photo Credit: [iNaturalist](#)

Electrified Millepede (*Anaptychia crinalis*)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: S. Brinkner, [LichenPortal](#)

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- SWBmk

Natural Resource District:

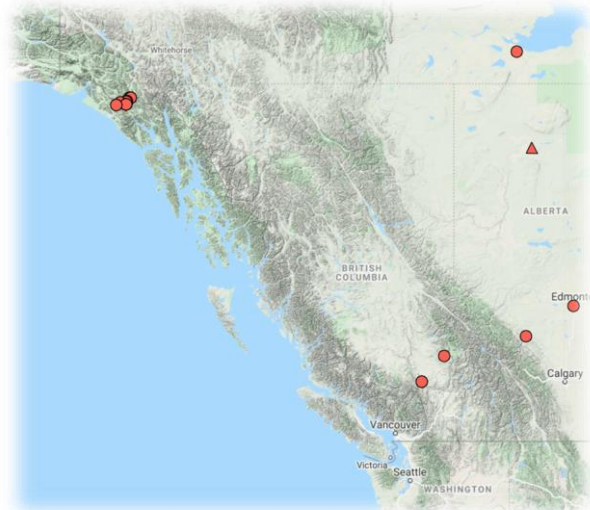
- Ft Nelson, Peace, Mackenzie, Prince George, Coast Mountains, Skeena Stikine



Photo Credit: [iNaturalist](#)

Range:

- Found in the interior of BC.
- North to Alaska to south to northern California.



Map Credit: [LichenPortal](#)

Flaking Tarpaper (*Collema flaccidum*)

Description:

- Flaking Tarpaper lichen is part of a group called the Tarpaper Lichens. These lichens have a blackish non-stratified medulla (horizontal layer within a lichen body) that becomes somewhat swollen, translucent, and jellylike when moistened.
- Flaking Tarpaper lobe margins are hairless; isidia (stalked, protruding reproductive parts) if present, also lacking hairs.
- Lobes brownish to olive-brownish or blackish, but never jet black above and below.
- Lobes averaging to more than 6 mm wide; lobe margins plane.
- Thallus (body of lichen) foliose (leaf-like) or, if somewhat fruticose (coral-like and shrubby), then lobes proportionally much shorter and broader.
- Isidia present, these mostly flattened and scalelike at maturity; scalelike lobules therefore rather common over upper surface.

Biology:

- Flaking Tarpaper lichens reproduce both sexually, through spores, and asexually through vegetative reproduction.
- Primary means of reproduction is asexual however, via isidia fragmentation.



Photo Credit: [iNaturalist](#)

Habitat:

- Flaking Tarpaper lichens grow in places where there is little soil, and are found on a variety of substrates, including rock surfaces, tree trunks, and on the ground.



Photo Credit: [iNaturalist](#)

Flaking Tarpaper (*Collema flaccidum*)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: [iNaturalist](#)



Photo Credit: [iNaturalist](#)

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHdm; CWHwh; CWHxm; PPxh

Natural Resource District:

- Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, North Island - Central Coast, Coast Mountains, Skeena Stikine, Campbell River, South Island

Range:

- Rare over (mossy) rocks and trees in open coastal localities in BC.
- South to California.



Map Credit: [E-Flora BC](#)

Frosted Glass-whiskers (*Sclerophora peronella*)



BCTS
BC Timber Sales

Description:

- Frosted Glass-whiskers is distinguished by its pale pinkish apothecia (the spore-producing sexual stage of reproduction), the reddish central core of the apothecial stalk visible in water, and the small, single-celled, smooth spores.
- Apothecia are short stalked (0.5-0.8 mm tall), and the head of young apothecia is covered with a faint, lemon yellow pruina (powder like substance).
- The thallus (lichen body) is within the substrate and not visible.
- The spores, produce a powdery mass on the surface of the apothecium known as a mazaedium; this is the fruiting body.
- The mazaedium is pale flesh-colored to yellowish brown and may be covered with white pruina at maturity.

Biology:

- The thallus has not been observed to produce vegetative propagules and therefore does not appear to reproduce asexually.
- All thalli of Frosted Glass-whiskers lichen have apothecia containing mature spores. As a result, it is the sexual spores housed in the capitulum of the stalked apothecia that must be distributed to new locations. This is thought to take place via wind, rain and, to a lesser degree, by invertebrates.
- These sexual spores must land and germinate near a compatible green algal partner before lichenization can occur.



Photo Credit: T. McMullin, [LichenPortal](#)

Habitat:

- Grows on the bark of deciduous trees, especially black cottonwood (*Populus*) in sheltered intermontane forests at lower elevations.



Photo Credit: [iNaturalist](#)

Frosted Glass-whiskers (*Sclerophora peronella*)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: [iNaturalist](#)



Photo Credit: [iNaturalist](#)

Range:

- Frosted Glass-whiskers lichens are only known from one collection in British Columbia in the Skeena River basin.
- In Canada, also in Nova Scotia.
- Found south into Washington State.



Map Credit: [Government of Canada](#)

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHws

Natural Resource District:

- Coast Mountains, Skeena Stikine

Great Blue Heron Fannini (*Ardea herodias fannini*)



Description:

- Two subspecies are identified in British Columbia, the *Fannini* on the West Coast and the *Herodias* in the interior.
- *Fannini* subspecies has darker plumaged, smaller in size and has a smaller clutch size.
- Adults are tall (60cm), long-legged wading birds with a sinuous neck held in an “S” curve at rest and in flight.
- The thick long bill is yellow and black
- Head and face are white.
- Mature Great Blue Herons, plumage is a steel blue-grey with dark blue-grey flight and tail feathers.
- As the birds mature a distinctive black plume extends from above the eye to beyond the back of head and a bib of long trailing plumes on the chest and scapula area become more pronounced.
- Juveniles are grey-brown on the back and upper wing plumage and lack the black eyebrow and adult head and bib plumes.



Photo Credit: [SCCP](#)

Biology:

- Herons are colonial nesting birds.
- Nest are built with sticks in large trees in forests and woodlands.
- Heronry can have many nests in a small area. Reports of up to 200 in two hectares.
- A single tree can have multiple nests.
- Nest are added to in successive years.
- Diet consists of small fish, crayfish, crabs, frogs, salamanders, snakes, large insects and small mammals.
- Clutch size 3-5, only one brood.
- Eggs are pale blue.
- Incubation by both parents lasts about 27 days.
- Young remain in nest for up to two months.

Phenology:

	Fledging/Parental Care											
	Eggs Laid/Chicks in Nest											
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	

Habitat:

- Forage in fresh and marine waters and riparian and tidal areas.
- Mudflats, grassland and farm field.
- During non-breeding periods birds may roost high up in mature trees in close proximity to foraging sites.
- Canopy closures of >80% is typical for Heronries.
- Most common on the South Coast in association with low elevation lakes, wetlands, sloughs and estuaries.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Great Blue Heron *Fannini* (*Ardea herodias fannini*)



Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- CDF, CWH.



Photo Credit: [SCCP](#)

Natural Resource District:

- Chilliwack, Sea to Sky, Haida Gwaii, North Island – Central Coast, Coast Mountains, Skeena Stikine, Campbell River, South Island.

Vocalization:

- [https://www.allaboutbirds.org/guide/Great Blue Heron/sounds](https://www.allaboutbirds.org/guide/Great_Blue_Heron/sounds)

Range:

- Great Blue Heron *Fannini* subspecies is distributed along the coast of British Columbia.
- A relatively small population is concentrated at a few breeding colonies (Green Lined) in southern British Columbia. Red dotted line is the Range.
- *Fannini* subspecies is non migratory.



Map Credit: [SCCP](#)

Grizzly Bear (*Ursus arctos*)

Description:

- Mostly brownish to yellowish coat. Often white-tipped guard hairs giving the grizzly look. Variations occur, from almost entirely black to almost white.
- Face is concave, with small eyes (in relation to head) and rounded ears.
- Large hump on the front shoulders provides the power of the Grizzly Bear, which helps the bear dig for food and dens when denning underground.
- Large flat paws are equipped with long (5cm) claws.
- Grizzly Bears tend to be solitary animals. The exception can be during the fall salmon runs where they may congregate to feed.



Photo Credit: [BC Ministry of Environment](https://www2.gov.bc.ca/gov/content/spe/spe_collections/bc_ministry_environment)

Biology:

- Grizzly Bears are omnivorous, feeding opportunistically on large and small animals, plants, and fish.
- Salmon runs in the fall are an important food source to prepare for fall hibernation.
- Not unusual for a male to delay hibernation and be active well into the winter months.
- Dens can be excavated underground, in trees and rock caves.
- Summer is the mating months, with females displaying delayed implantation.
- Young are born in the den in January to March.

Habitat:

- Found in a wide variety of habitat from alpine to valley bottoms. Most common in higher elevation meadows and avalanche chutes.
- Avalanche tracks area a critical habitat component that provide spring foraging opportunities of emerging vegetation and roots.
- Dens are usually on steep north-facing slopes, with soils suitable for diffing and where vegetation will stabilize the roof of the den and snow will accumulate.

Phenology:

Young born											Hibernate	
Hibernate											Hibernate	
Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	

Black Bear



Grizzly Bear



Color and Size can be misleading.
Look for a combination of characteristics.

Photo

Credit: [USDAFS](https://www.usdafs.com)

Grizzly Bear (*Ursus arctos*)



Field Action Required:

- If a Grizzly Bear is observed, stop work in the immediate area until the bear has moved out of the work area.
- If a potential Grizzly Bear den is observed, stop work. If safe to do so document the location of the den, take photos, and flag the den. Report the den to supervisor and contact BCTS.
- Never approach a bear. If the status of occupation of the den is unknown do not approach.

Management Recommendations:

- Establish appropriate buffer zone around feature through consultation of BMP for species, or specialist if no BMP exist for the Business Area.
- Refer to BCTS Standard Operating Procedure or Management Protocol.
- Review higher level plans, FRPA, WHAs, OGMA's, Legal Orders.

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

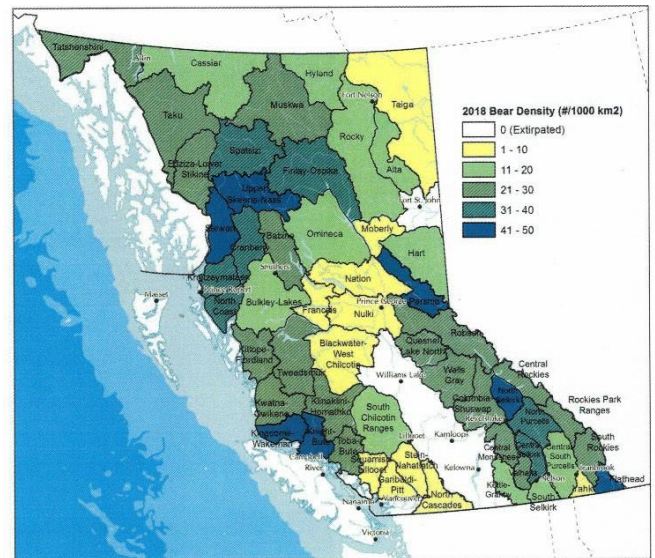
- BAFA, BWBS, CMA, CWH, ESSF, ICH, IDF, IMA, MH, MS, SBPS, SBS, SWB.

Natural Resource District:

- Mackenzie, Prince George, Nadina, Skeena, Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountains, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, North Island – Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Range:

- Grizzly Bears inhabit all of British Columbia except some of the coast islands and coastal mainland. Although there are areas where the bears are thought to be extirpated these areas may still be used.



Map Credit: [Ministry of Environment](#)

Gyrfalcon (*Falco rusticolus*)

Description:

- The largest of the falcon's, adults 51-64cm.
- White eyebrow stripe and narrow mustache.
- Varies in colour from brown, to grey and white.
- In flight, armpits of wings show blackish patches.

Biology:

- Nests are widely scattered on isolated upland cliffs, buttes, rock outcrops, river bluffs or cliffs surrounded by tundra.
- Gyrfalcons will use the unused nest of eagles or ravens.
- Nests range from no construction, to on the ground with little construction to sticks nest built by other birds.
- Nests are often protected by overhangs

and away from the prevailing winds.

- Clutch size 3-5, only one brood.
- Eggs white to reddish brown, with variable cinnamon spots.
- Incubation by both parents lasts about 34-36 days.
- Young remain in nest for up to 49-56 days.
- Annually monogamous.
- Diet consists of Willow Ptarmigan and Rock Ptarmigan but also hunt other birds, including seabirds, waterfowl, shorebirds and songbirds.
- Also hunt mammals such as hares, ground squirrels, lemmings, and young arctic fox.
- Gyrfalcon take prey in flight, it makes most of its captures by striking prey and driving it to the ground rather than grasping it in the air.

Phenology:

			Nesting			Fledging					
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: allaboutbirds

Habitat:

- Open arctic country, from alpine tundra to grasslands and marshes.
- Can be found on offshore islands, barren lands with rocky outcrops, river bluffs, lake bluffs, and mountainous terrain up to more than 5,000 feet in elevation.
- Breeds in the far north, year-round in subarctic and arctic.
- During non-breeding birds may venture further south to the northern United States.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Gyr Falcon (*Falco rusticolus*)



Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not Listed.
- Provincial List: Blue.
- Identified Wildlife: No.

BEC Zones:

- BAFA, BG, BWBS, ICH, IDF, ESSF, SBPS, SBS, CDF, CWH, SWB, IMA, MS, MH, CMA.

Natural Resource District:

- Chilliwack, Sea to Sky, Sunshine Coast, Nadina, Skeena Stikine, Coast Mountains, Quesnel, Cariboo – Chilcotin, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountains, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, Prince George, Mackenzie, Stuart Nechako, North Island – Central Coast, Campbell River, South Island.

Vocalization:

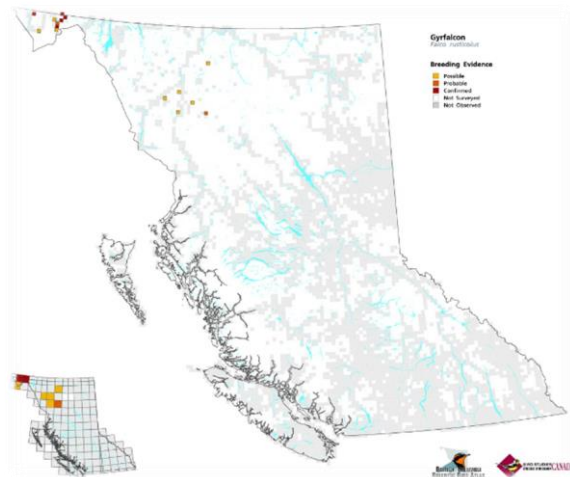
- <https://www.allaboutbirds.org/guide/Gyrfa/icon/sounds>

Range:

- In British Columbia the Gyr Falcon is mostly in the northwest.
- Non-breeding birds may migrate along the west coast to the northern United States for wintering.



Photo Credit: [allaboutbirds](https://www.allaboutbirds.org)



Map Credit: [birdatlas](https://www.birdatlas.org)

Marbled Murrelet (*Brachyramphus marmoratus*)

Description:

- Small bulky seabird with a large head for its size.
- Short thin bill.
- Summer plumage dark brown with red-brown tints. Crown and face may be darker than body.
- Winter plumage mostly black above and white below with white scapular strip.

Biology:

- Food is small fish and pelagic crustaceans.
- A diving bird using their wings for underwater thrust.
- Nests are of solitary pairs.
- Often nests are within 30km of the ocean but can be as far as 65km inland.
- Nests are inconspicuous on larger mossy branches.
- Eggs, usually one, placed on well-developed moss layer often in the branches of old growth trees.
- Incubation, approximately 30 days, fledging approximately 30 days.
- The breeding season is long (late-April through early September).
- Breeding season overlaps with fledging and parental care.

Phenology:

		Breeding, Fledging and Parental Care										
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	



Photo Credit: [birdatlas](https://birdatlas.com)

Habitat:

- Spends most of its time along the inshore marine habitat within 0.5 kms of shore in shallow waters.
- They spend time on land, for nesting, breeding and rearing their young, most of which is in Old Growth coastal forests of Sitka Spruce and Western Hemlock.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Marbled Murrelet (*Brachyramphus marmoratus*)



Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- CDF, CWH, MH.

Natural Resource District:

- Skeena, Stikine, Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, North Island, Central Coast, Campbell River, South Island.

Vocalization:

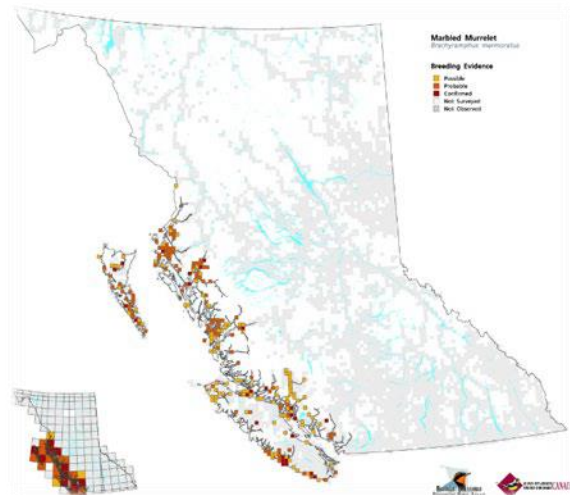
- https://www.allaboutbirds.org/guide/Marbled_Murrelet/sounds

Range:

- Marbled Murrelet are found along the entire coast of British Columbia.
- However, they may migrate farther north in the summers and south in the winters. Resident populations exist throughout its range in BC.
- Found along the Pacific coast from Northern California to the Alaskan Aleutian Islands.



Photos Credit: [inaturalist](#)



Map Credit: [birdatlas](#)

Moose (*Alces alces*)

Description:

- Adult bull 2 m at shoulder, most massive antlers of any deer family member.
- Fall, adult cows weigh 340 to 420 kg and bulls 450 to 500 kg.
- Only bulls have antlers.
- Antlers shed mid Nov-Mar.
- Long legs (aid travel in deadfalls and snow), large ears, bulbous nose, shoulder hump, and dark brown to blackish coat.
- No rump patch but have a bell of skin and hair under the throat and a large, overhanging upper lip.



Photo Credit: [Wildsafe BC](https://www.wildsafebc.com/)

Biology:

- Breed Sep-late Oct (peak mid-Sep), One calf born late May-early Jun.
- Newborns weigh 11-16 kg and stand on their first day.
- Calves eat vegetation at 2 weeks, completely weaned by fall. Weigh 134-180 kg by early winter.
- Sexually mature at 1.5 years, but peak activity starts at 4-6 years.
- Seasonal home range 5-10 km² but annual home range much larger.
- Do not defend home range and do not have year-round dominance hierarchies like Elk and Bighorn Sheep.
- Browse – summer, new growth of trees and shrubs (leaves, twigs, and bark), and vegetation associated with water.
- Winter forage, willows red-osier dogwood, cottonwood, paper birch, aspen, high-bush cranberry, false box, and subalpine fir are also important. Strip bark from willows and poplars.
- Main causes of mortality are starvation, and predators.

Habitat:

- Winter snow accumulation strongly affects populations more so than wolf density.
- Competition for food, not wolf predation or snow, has greater regulatory effect.
- Large populations may degrade habitat, resulting in population crash.
- Browsing may alter structure and dynamics of boreal forest ecosystems.
- Prefer mosaic of second-growth forest, openings, swamps, lakes, wetlands.
- Requires water bodies for foraging and broadleaf-conifer forests for winter cover.
- Uses dense shade or bodies of water to avoid heat.
- Mineral licks important sodium source.
- In mountainous areas, migrate between winter-spring ranges in valley bottoms and higher-elevation summer ranges.
- Some Moose remain in valleys year-round.

Phenology:

								Wean				
				Birth				Mate				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	

Moose (*Alces alces*)



Photo Credit: [iNaturalist](#)

Field Action Required:

- If observed, document (take photos, GPS coordinates) the location.
- If a mineral lick is identified document (take photos, GPS coordinates) the location.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not Listed.
- Provincial List: Yellow.
- Identified Wildlife: No.

BEC Zones:

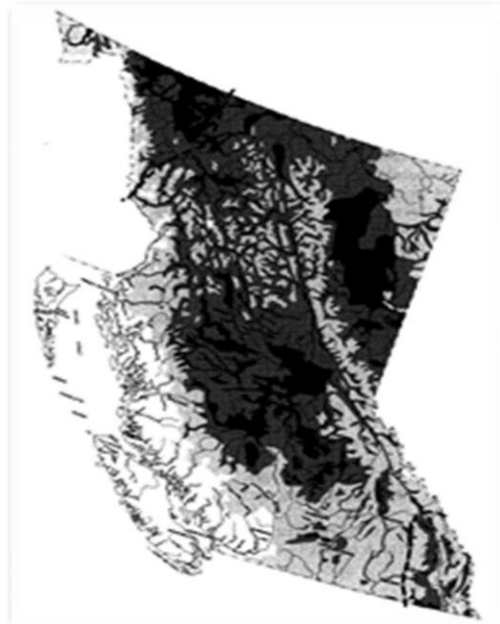
- BWBS, SWB, BAFA, CWH, SBPS, IDF, IMA, MS, SBS, ICH, ESSF,
- Poor habitat – BG, PP.

Natural Resource District:

- Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, Mackenzie, Prince George, North Island - Central Coast, Coast Mountains, Stuart Nechako.

Range:

- Found across entire interior of British Columbia. Most abundant in central and sub-boreal interior, northern boreal mountains, and BC's boreal plains.
- Also common in mountainous valleys, except for a few dry southern valleys. Usually absent from coastal regions but penetrate to tidewater from Bute Inlet north.



Map Credit: [E-Fauna BC Atlas](#)

Mountain Crab-eye (*Acroscyphus sphaerophoroides*)

Description:

- Mountain Crab-eye is a medium-sized, yellowish to pale grey cushion-forming lichen.
- The lichen consists of dense tufts of cylindrical, stout, coral-like erect to semi-erect branches.
- The interior of the lichen is yellow to bright orange and solid.
- Fertile branches have immersed black fruiting bodies, giving the branches the appearance of stalked crab eyes.
- Non-fertile branches are smaller in diameter and height.
- The passively dispersed spores are dark brown, peanut-shell shaped, unornamented, and not well adapted for wind dispersal.

Biology:

- Spores are not actively ejected into the air like most lichen spores and so are not dispersed effectively by wind but are probably spread by animals or carried on bird's feet.
- Under suitable conditions, spores germinate and produce fungal strands, or hyphae. In order for a new lichen to regenerate, the fungal strands must encounter a compatible algal partner.
- Mountain Crab-eye does not reproduce asexually via vegetative propagules, nor does it appear to reproduce by fragmentation.
- Longevity, generation time and many other biological parameters of Mountain Crab-eye are currently unknown.



Photo Credit: P. Bartemucci, [Government of Canada](#)

Habitat:

- Mountain Crab-eye is almost exclusively found on trees (although at least one occurrence on rock has been noted in BC).
- Found in a very restricted climatic zone which appears to be neither too wet nor too dry.
- Colonizes the stems and branches of standing snags or the dead, spiked tops of live trees.
- The trees may be Mountain Hemlock, Yellow-cedar, or Sitka Spruce.



Photo Credit: [iNaturalist](#)

Mountain Crab-eye (*Acroscyphus sphaerophoroides*)



Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.

Natural Resource District:

- Nadina, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, North Island - Central Coast, Coast Mountains, Skeena Stikine

Range:

- In BC, Mountain Crab-eye is almost exclusively found within the coastal mountains between the outer coast and the interior of the province.
- Found north to Alaska, and south to Washington State.
- Elsewhere, this species is widespread but rare in the western parts of North and South America, South Africa, and southern and eastern Asia.



Photo Credit: P. Williston, [Government of Canada](#)

Status:

- SARA Schedule: 1-SC (2019)
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHws



Map Credit: [BC Conservation Data Centre](#)

Mountain Goat (*Oreamnos americanus*)



BCTS
BC Timber Sales

Description:

- Moderate-sized ungulate, stocky body, hump above shoulder, thin neck, sharply pointed, thin black horns, and long, narrow pointed ears.
- Tail and lower limbs are short.
- Hooves rather than being concave on the underside, have a thick, soft, rough-textured pad extending to the edge of the keratin hoof.
- Coat completely white or yellowish white. Color distinguishes it from other ungulates.
- Nose, horns, hooves, and dew claws are black.
- Both sexes have beard on the chin and short mane along underside of neck and short horns, 200-280 mm, that are never shed.
- Adult weights, males 70-120 kg and females 55-75 kg.

Biology:

- Rut Nov-Dec.
- 1 or 2 (rare) kids born late May-early Jun, weigh 2-3 kg, and wean 4 months.
- Adult females and young may be in small summer groups. Males are solitary but join females in fall.
- Home range 6-24 km².
- Summer diet – grasses, and forbs, also shrubs and conifers. Winter diet – mosses, lichens, also grasses, shrubs and conifers.
- Additional minerals from mineral licks.
- Remain at low elevations in spring, access earliest flush of vegetation. Spring to summer, follow new growth upward.
- Active dawn to mid-morning and late afternoon to evening.
- Predators – mountain lions, wolves, and grizzly bears.
- Threats – human intrusions and industrial and recreational disturbance.

Phenology:

			Birth				Wean		Mate	
Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



Photo Credit: [E-Fauna BC Atlas](#)

Habitat:

- Alpine and subalpine. Steep grassy talus slopes, grassy cliff ledges, alpine meadows at timberline or above.
- Seek shelter and food in stands of spruce or hemlock in winter.
- Young born on rock ledges or steep cliffs.
- Migrate up and down mountains between summer and winter areas.
- Suitable escape terrain is a limiting habitat factor.
- Alpine vegetation low sodium and high potassium levels, populations obtain needed elements from mineral licks.
- Winter range, steep sites that shed snow, warm south to west exposure.

Mountain Goat (*Oreamnos americanus*)



7.5 * 4.8 cm



Photo Credits: [Yukon Department of Environment](#)

Field Action Required:

- If a Mountain Goat is observed, stop work and document (photo, GPS coordinates) the location.
- If a mineral lick is identified document (photo, GPS coordinates) the location.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not Listed.
- Provincial List: Blue.
- Identified Wildlife: No.

BEC Zones:

- BAFA, BG, BWBS, CDF, CMA, CWH, ESSF, ICH, IDF, IMA, MH, MS, PP, SBPS, SBS, SWB.

Natural Resource District:

- Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades

Range:

- Widespread in BC with large populations.
- All major mountain systems of mainland BC but absent from Vancouver Island and Haida Gwaii, Interior Plateau and Peace River Lowlands.



Map Credit: [E-Fauna BC Atlas](#)

Little Brown Myotis (*Myotis lucifugus*)

Description:

- Females slightly larger than males.
- Adults weigh 7-9 grams, 7-10 cm long, forearm 33-41 mm, and wingspan 22-27 cm.
- Fur is cinnamon buff to dark brown on back and may be glossy and slightly paler on the belly.
- Wings and tail lack fur and are dark brown.
- Ears are large compared to size of head.
- Tragus (fleshy projection which covers the entrance of the ear) is short and blunt.
- Summer, males largely solitary, and females form colonies.
- Difficult to distinguish among bat species.

Biology:

- Nocturnal.
- Peak feeding periods 1-2 hours after sunset and before sunrise.
- Few natural predators.
- Insectivorous, primarily feed on aquatic flies but also eat beetles, ants, crane flies, crickets, and leafhoppers.
- Forage while flying over water and semi-open areas such as rocky hillsides, lawns, fields, and forest edges
- Adjust habitat in response to seasonal changes in insect abundance.
- Breeding occurs during fall (Sep, Oct), fertilization after hibernation in spring (Feb, Mar).
- Young born May to July, fly within 3 weeks and are independent after a month.
- Migrate 50-200 km between hibernacula and summer roosts.

Phenology:

	Implant		Birth		Copulate						
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



Photo Credit: [Parks Canada](#)

Habitat:

- Dry open forests as well as wet riparian areas from low elevation IDF up to 2300 meters.
- Daytime roosts protect from predation and weather extremes.
- Roost sites preferably on south to southeast aspects.
- Summer, in attics, under bridges, in hollow trees, under loose bark or shingles, or in rock crevices.
- Require open water and may concentrate at pools and streams to drink at dusk.
- Hibernating habitat poorly understood but thought to hibernate in caves or old mines with stable temperature (2-12 C).
- If undisturbed, occupy same sites year after year.



Photo Credit: [NL Ministry Fisheries, Forestry & Agriculture](#)

Little Brown Myotis (*Myotis lucifugus*)



Field Action Required:

- If a Little Brown Myotis observed stop work and do not handle bat.
- If roosting or hibernation site is identified, do not disturb the bats.
- In both instances, document (photo, GPS coordinates) the location.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1- Endangered.
- Provincial List: Yellow.
- Identified Wildlife: No.

BEC Zones:

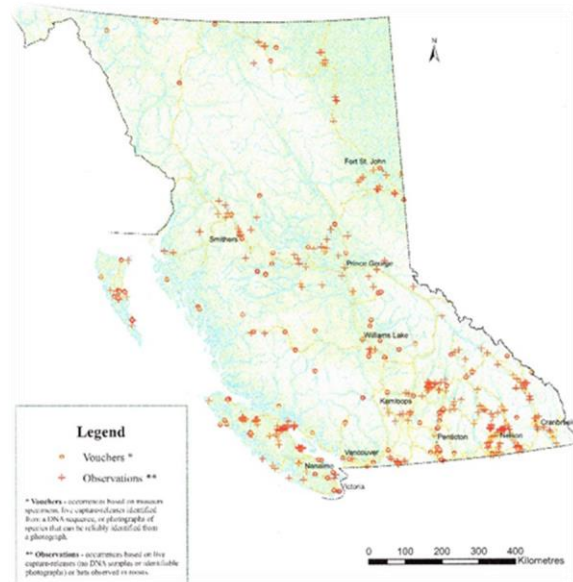
- BG, BWBS, CDF, CWH, ESSF, ICH, IDF, MH, MS, PP, SBPS, SBS, SWB.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, Mackenzie, Prince George, North Island - Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Range:

- Distributed in forested habitats throughout BC including Haida Gwaii and Vancouver Island.



Map Credit: [BC Ministry of Environment](https://www2.gov.bc.ca/gov2/department_of_environment)

Northern Mountain Caribou (*Rangifer tarandus*) pop. 15



Description:

- Dark brown coat with creamy white neck, mane, shoulder stripe, underbelly, underside of tail, patch above each hoof.
- Large crescent-shaped hooves to provide flotation in snow and soft ground.
- Antlers of flattened, compact, and relatively dense.
- Both sexes have antlers for part of year.
- 100-120 cm at shoulder. Males weigh 160-210 kg and females 110-150 kg.

Biology:

- Adult survival is high but calf survival and recruitment to breed is very low.
- Live in discrete herds.
- Population, overall, is stable but individual herds not.
- Most vulnerable ungulate species in a multiple predator-prey system due to low fecundity.
- Calving cows spatially segregate and utilize habitats that are inaccessible or less desirable to predators.
- Winter diet terrestrial lichens and some arboreal lichens.
- Do not compete directly with other species due to winter diet.
- Spring diet, use of forbs and graminoids increases, summer food is a wide variety of forbs, graminoids, lichens, fungi, and leaves.
- Forage quality and availability directly affects condition of females and calf survivorship.
- Polygynous breeding late Sept-mid Oct.
- Larger rut (≤ 20) compared to ecotypes.
- Calves are born late May – early Jun.
- Consistent use of mineral licks.
- Home ranges variable, 1100–1900 km².



Photo Credit: [Environment & Natural Resources Canada](https://www.ec.gc.ca/enr)

Phenology:

				Birth	Care	Breeding					
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Habitat:

- Spend winters in mature, low elevation lodgepole pine or black spruce forests, or on wind-swept alpine slopes feeding on terrestrial lichens.
- Long-distance migrations to calve and spend summer in mountainous terrain.
- Winter, found either at high elevations above treeline on windswept alpine slopes or at lower elevations in forest.
- Large elevation range due to wide distribution, low, 500-1500 m; high 1500->2000 m.
- Connectivity within and between range habitat is essential for survival.
- Provides forage and spatial distance needed to survive and avoid predation.
- Fragmentation concentrates caribou in smaller patches, increases density, which can lead to increased predation pressure.
- Little or no evidence numbers can be maintained in areas with high levels of forestry, predation, and recreation.

Northern Mountain Caribou (*Rangifer tarandus*) pop. 15



Field Action Required:

- If observed, stop work in the immediate area until a biologist with experience in Caribou surveys the area.
- Take photos and record the sighting's coordinates.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- BAFA, BWBS, ESSF, ICH, IMA, MH, SBS.

Natural Resource District:

- Fort Nelson, Peace, Mackenzie, Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Prince George, Coast Mountains, Skeena Stikine, Stuart Nechako.

Range:

- Two discrete geographic distributions.
- Range overlaps with barren-ground and woodland caribou (Boreal, Central Mountain).
- Mountainous and adjacent plateau areas with lower snowpacks in West central and Northern British Columbia Interior.



Photo Credit: [inaturalist](#)

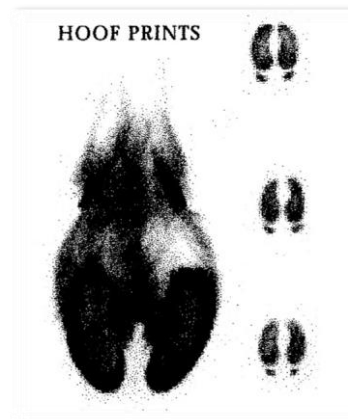


Photo Credit: [BC Ministry Environment](#)



Map Credit: [BC Ministry of Environment](#)

Northern Goshawk *atricapillus* (*Accipiter gentilis atricapillus*)



Description:

- There are two subspecies of the Northern Goshawk in British Columbia, *Atricapillus* subspecies breeds throughout the interior while *Laingi* subspecies breeds in the coastal rainforests west of the Coast Mountains.
- A large (60cm long) sturdy hawk.
- Long tail rounded at the tip with a thin white band.
- Broad round tipped wings.
- Wing span of around one meter.
- The bill and claws are bluish gray to black.
- Noticeable feature is the white eye stripe over blood red eyes.
- In adults the back is blue gray.
- The head has a distinctive white superciliary line separating a black cap from the whitish sides of the crown.
- Underparts are whitish to pale gray with fine horizontal wavy lines.
- Darker gray streaks on the lower breast, abdomen, and tibiae.
- Adult females may be more brownish above.
- Females are larger than males.
- Juveniles are browner with heavy streaking below, and yellow eyes.

Biology:

- The Northern Goshawk diet varies from birds, small mammals, amphibians and reptiles and insects.
- They hunt below the canopy in open forests.
- Stick nests are built under the canopy in large trees.
- The same nest is used year after year, but can have alternate nests.
- Clutch size of 2-4, one brood annually.
- Eggs are bluish white.
- Incubation by female takes 28-32 days.
- Nestlings stay in nest 34-35 days.

Phenology:

			Breeding	Nestling/Fledging							
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: [inaturalist](#)

Habitat:

- Mature and old growth forests for nesting.
- Open and dense forests of all types for foraging.
- Tree snags, coarse woody debris and open forests are all important habitat attributes.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Northern Goshawk *atricapillus* (*Accipiter gentilis atricapillus*)



Status:

- SARA Schedule: Not Listed.
- Provincial List: Blue.
- Identified Wildlife: No.

BEC Zones:

- PP, ESSF, ICH, IDF, PP, MS, SBS, SWB, BWBS.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo Chilcotin, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Mackenzie, Prince George, Coast Mountains, Stuart Nechako, Fort Nelson, Peace.

Vocalization:

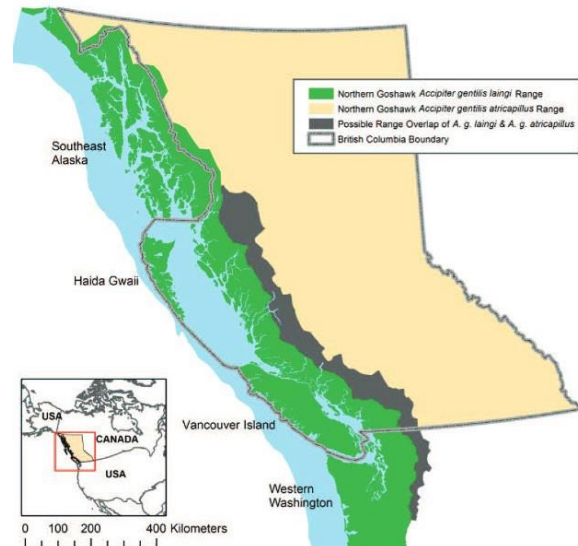
- https://www.allaboutbirds.org/guide/Northern_Goshawk/sounds

Range:

- Interior of British Columbia. Essentially a non-migratory bird, but will occasionally move south in response to prey availability.
- Residents use up to 2400 hectares for foraging.



Photos Credit: [inaturalist](https://www.inaturalist.org/)



Map Credit: modified NOGO Recovery Team 2008

Northern Goshawk laingi (*Accipiter gentilis laingi*)

Description:

- There are two subspecies of the Northern Goshawk in British Columbia, *Laingi* breeds in the coastal rainforests west of the Coast Mountains and *Atricapillus* breeds throughout the interior.
- A raven sized (50cm long) sturdy hawk.
- Adults are brown-gray to slate-gray on the back.
- Underparts are pale-gray with fine horizontal grey bars and darker vertical streaking.
- There is a distinctive whitish line above the eye and a dark-gray to black cap.
- Long tail rounded at the tip with a thin white band.
- Broad round tipped wings.
- Wing span of around one meter.
- The bill and claws are bluish gray to black.
- Immature birds are an overall mottled brown.
- Adult females may be more brownish above.
- Females are larger than males.
- Juveniles are browner with heavy streaking below, and yellow eyes.

Biology:

- The Northern Goshawk diet varies from birds, small mammals, amphibians and reptiles and insects.
- They hunt below the canopy in open forests.
- Stick nests are built under the canopy in large trees.
- The same nest is used year after year, but can have alternate nests.
- Clutch size of 2-4, one brood annually.
- Eggs are bluish white.
- Incubation by female takes 28-32 days.
- Nestlings stay in nest 35-55 days.

Phenology:

		Breeding			Nestling/Fledging						
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: [BC Environment](#)

Habitat:

- Mature and old growth forests for nesting.
- Open and dense forests of all types for foraging.
- Tree snags, coarse woody debris and open forests are all important habitat attributes.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Northern Goshawk *laingi* (*Accipiter gentilis laingi*)



Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Red.
- Identified Wildlife: Yes.

BEC Zones:

- CWH, CDF.



Photos Credit: [SCCP](#)

Natural Resource District:

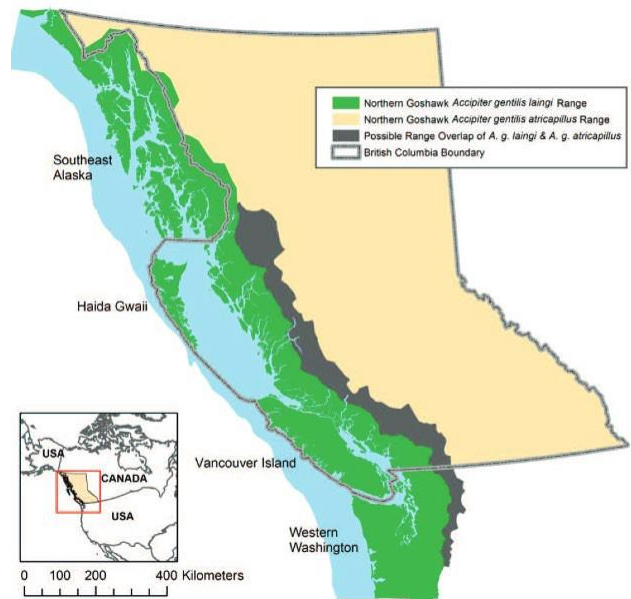
- Chilliwack, Sea to Sky, Sunshine Coast, North Island - Central Coast, Coast Mountains, Skeena Stikine, Campbell River, South Island.

Vocalization:

- https://www.allaboutbirds.org/guide/Northern_Goshawk/sounds

Range:

- The coastal subspecies (*Accipiter gentilis laingi*) occurs along the northwest coast of North America from Washington to Alaska.
- Resident year round on British Columbia coast.



Map Credit: modified NOGO Recovery Team 2008

Northern Red-legged Frog (*Rana aurora*)



Description:

- Northern Red-legged Frog is brown to reddish or copper-brown colour with black spots scattered over its back.
- The underbelly of the species is whitish, with a reddish colouration appearing on the lower belly and undersides of the hind legs as the frog gets older.
- Bones on the undersides of the hind legs can be seen through the translucent skin.
- This species has a dark eye mask above a narrow, cream-coloured jaw stripe on each side of the face.
- Young may have yellow instead of red on underside of legs and in groin; adult males have enlarged forelimbs and thumb base and more extensive webbing.
- Adults reach 50-60 mm snout-to-vent length, and they have two folds running down the length of the back.
- Tadpoles are tan or olive coloured with gold specks, 70-80 mm total length prior to metamorphosis; eyes in from the margins of the head; tall, short tail fin.
- Eggs are large, gelatinous, grapefruit- to cantaloupe-sized mass that can become loose, floating, and frothy in appearance near hatching.

Biology:

- Northern Red-legged Frogs reach sexual maturity at 3+ years of age and live 8-10 years.
- They are explosive breeders, with reproduction occurring for only a short period in early spring (e.g., 2-4 weeks).
- Males emit an advertisement call under water that may not be audible to the human ear at the surface.
- Females breed every year, laying their egg mass below the water surface in the littoral zone (30-90 cm), often amongst emergent vegetation.

- Like other amphibians, Red-legged Frogs exhibit site fidelity to natal breeding ponds, and females may lay their eggs in the same locations within a breeding site each year.
- Females lay an average of 530-680 eggs per clutch, which usually hatch within 1 to 1.5 months depending on water temperature.
- The larval period is long compared to other anurans, lasting 2.5 to 3.5 months.

Phenology:

Breeding (Eggs)												
Eggs Hatch (Tadpoles)												
		Toadlets										
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	



Photo Credit: [iNaturalist](#)

Habitat:

- Terrestrial stages of the Red-legged Frog are most typically found at lower elevations, below 200 m, but have been recorded at over 1000 m.
- It is associated with streams, ponds, or marshes, but may also be found far from water in moist forests.
- Wetlands or ponds with a water depth of 0.5-2 m are required for breeding.

Northern Red-legged Frog (*Rana aurora*)



Photo Credit: [Government of Canada](#)



Photo Credit: V. George, [E-Flora BC](#)

Field Action Required:

- If observed or if a breeding area is identified, stop work in the immediate area.
- Take photos and record coordinates.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1-Special Concern (2005)
- Provincial List: Blue
- Identified Wildlife: Yes

BEC Zones:

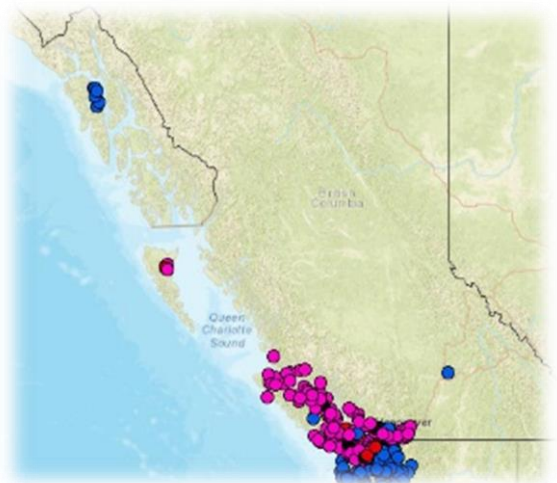
- CWHdm, CWHds, CWHmm, CWHvh, CWHvm, CWHwh, CWHxm, CDFmm, MH

Natural Resource District:

- Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, North Island - Central Coast, Campbell River, South Island

Range:

- Range extends Haida Gwaii to southwestern BC, including Vancouver Island.
- South along the coast of the United States, to northwestern California.



Map Credit: [E-Flora BC](#)

Olive-sided Flycatcher (*Contopus cooperi*)



Description:

- Largest of the Pewee family.
- Medium sized (18-20cm) songbird.
- Dark brownish olive gray upperparts, with whitish throat and breast and olive gray sides.
- A short tail.
- Large beak.
- Erect crest on head.
- An aerial foraging specialist, foraging near or at the forest canopy level.



Photo Credit: [inaturalist](https://www.inaturalist.org)

Biology:

- Diet varies but most important are flying bees, wasps, and ants. Other prey

species include flies, moths, beetles and dragonflies.

- Nests, cup style, are constructed mostly on conifer trees near the end of a branch.
- Nest site is often high on the tree and away from the trunk.
- Clutch size of 2-4, one brood annually.
- Eggs are creamy white or buff with ring of brownish spots on large end.
- Incubation by both parents 13-14 days.
- Nestlings stay in nest 21-23 days.
- Annually monogamous.

Habitat:

- Open conifer and mixedwood forests. Often near water or wetlands.
- Tall snags or residual trees are needed to defend territory and searching for prey.
- Highest densities are near mature trees surrounded by disturbed forests (burns or cutblocks).
- Open disturbed areas are important for foraging.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Phenology:

				Breeding		Fledging					
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Olive-sided Flycatcher (*Contopus cooperi*)



Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: No.

BEC Zones:

- BWBS, CDF, CWH, ESSF, ICH, IDF, PP, SBS, SBPS, MH, MS, SWB.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo – Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Mackenzie, Prince George, Fort Nelson, Peace, North Island - Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Vocalization:

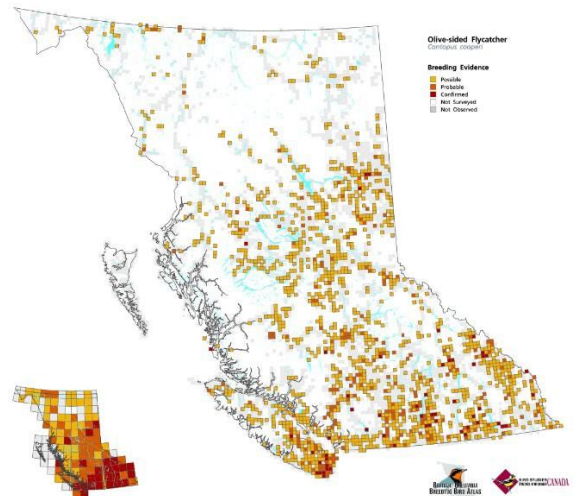
- https://www.allaboutbirds.org/guide/Olive-sided_Flycatcher/sounds

Range:

- Olive-sided Flycatchers are found throughout British Columbia.
- Territory is relatively large, from 10-20 hectares.



Photos Credit: [inaturalist](https://www.inaturalist.org)



Map Credit: [birdatlas](https://www.birdatlas.org)

Osprey (*Pandion haliaetus*)

Description:

- Ospreys have long narrow wings, dark brown upperparts, and white underparts
- Head is white with a prominent dark eye streak, and dark wrist patches (visible in flight) on the underside of the wings.
- Immatures have pale buff edging on the dark feathers of the upper surface.
- Females are more likely than males to have a necklace of dark streaking.
- Average length 56-64 cm, wingspan 147-183 cm.

Biology:

- The Osprey diet consists almost entirely of fish.
- In some locations small mammals, birds, reptiles and amphibians or crustaceans may be taken.
- Capture prey with a feet first plunge, usually into water.
- Build large stick nest on natural nest sites, usually in treetops of large trees, cliffs and on rocky ledges.
- The same nest is used year after year, but can have alternate nests.
- Nests are usually close to open, shallow water, usually within 4km, can be 20km.
- Clutch size of 1-4, one brood annually.
- Eggs are white pinkish, marked with brown olive spots.
- Incubation by female takes 35-42 days.
- Nestlings stay in nest 50-60 days and are dependent on parents for several weeks after fledging.



Photo Credit: [inaturalist](https://www.inaturalist.org)

Habitat:

- Primarily along rivers, lakes, streams and marine environments.
- Open sites with suitable nesting sites close to water.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Phenology:

				Breeding		Fledging					
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Osprey (*Pandion haliaetus*)



Status:

- SARA Schedule: Not Ranked.
- Provincial List: Yellow
- Identified Wildlife: Yes.

BEC Zones:

- Not identified.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo - Chilcotin, Chilliwack, Sea to Sky, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountains, Selkirk, Sunshine Coast, North Island - Central Coast, Coast Mountain, Okanagan Shuswap, Fort Nelson, Peace, Mackenzie, Prince George, North Island – Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Vocalization:

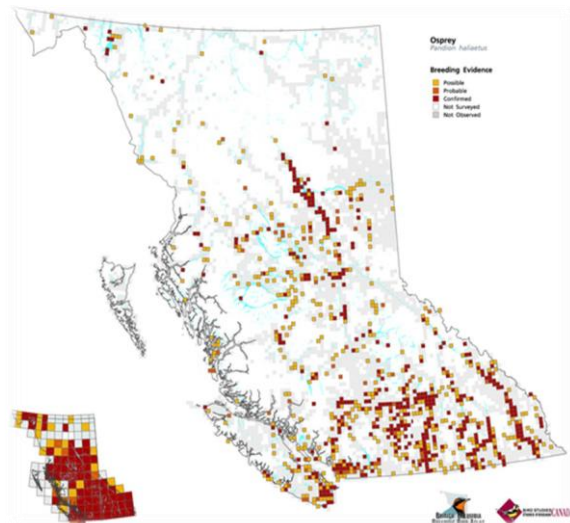
- <https://www.allaboutbirds.org/guide/Osprey/sounds>

Range:

- Throughout British Columbia during the breeding season except Haida Gwaii.



Photos Credit: [inaturalist](https://www.inaturalist.org/)



Map Credit: [birdatlas](https://www.birdatlas.org/)

Peregrine Falcon, pealei (*Falco peregrinus pealei*)

Description:

- Peregrine Falcons are a medium sized falcon.
- Fastest bird in the world. Closes wings to body when stooping or dropping on prey.
- The *Pealei* and *Anatum* Falcon have long pointed wings, a dark crown and nape.
- Adults are bluish-grey or darker in colour and have a blackish facial stripe that extends from the eye to along-side the lower jaw.
- Forehead is black or gray pale in adults, and brownish pale above in immatures.
- Two subspecies, *F.p. pealei* and *F.p.*

anatum breed in British Columbia.

- The *pealei* subspecies are slightly larger than the *anatum*.
- They are whitish, greyish or buff-coloured underneath and have blackish spots and stripes.
- Females are larger than males.

Biology:

- The Peregrine Falcon diet is related to concentrated populations of shorebirds, waterfowl, pigeons, songbirds.
- Other prey includes bats, rodents and insects.
- Peregrines require an ample supply of suitable prey species in areas that permit aerial hunting.
- The *pealei* subspecies nest on rock cliffs above lakes or river valleys where abundant prey is nearby.
- Nest is a well-rounded scrape on the ground usually on a cliff ledge.
- Clutch size of 2-6, one brood annually.
- Eggs are white pinkish occasionally marked with brown or red blotches.
- Incubation by female takes 29-32 days.
- Nestlings stay in nest 35-42 days.

Phenology:

		Breeding			Fledging						
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: [inaturalist](https://www.inaturalist.org)

Habitat:

- Open landscapes with suitable nesting cliff sites.
- The *pealei* subspecies are associated with coastal areas of British Columbia.
- Sometimes nesting under Sitka Spruce roots.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Peregrine Falcon, pealei (*Falco peregrinus pealei*)



Status:

- SARA Schedule: 1-Special Concern
- Provincial List: Blue.
- Identified Wildlife: No.

BEC Zones:

- CWH, CDF.

Natural Resource District:

- Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, North Island - Central Coast, Coast Mountains, Skeena Stikine, Campbell River, South Island.

Vocalization:

- https://www.allaboutbirds.org/guide/Peregrine_Falcon/sounds

Range:

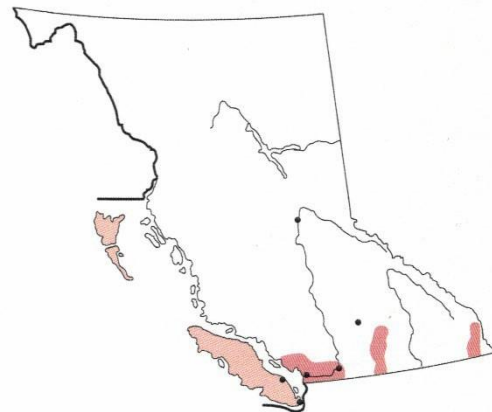
- The *pealei* subspecies of the Peregrine Falcon is restricted to Pacific coastal areas of British Columbia.
- This subspecies breeds on the Queen Charlotte Islands, Triangle Island, the central coast of British Columbia, northern and western Vancouver Island, and eastern Vancouver Island and the Gulf Islands south to Nanaimo. Some individuals of the *pealei* subspecies of the Peregrine Falcon do not migrate.



Photos Credit: [inaturalist](https://www.inaturalist.org/)

Present breeding distribution of the Peregrine Falcon in British Columbia

- *F.p.anatum*
- *F.p.pealei*



Map Credit: [BC Ministry of Environment](https://www2.gov.bc.ca/gov2/ministry_of_environment/)

Stone's Sheep (*Ovis dalli stonei*)

Description:

- Stone's Sheep with its grey to black body, white rump patch and black tail.
- White inside the ears and grey on the outside, a white belly, white on the backs of the legs.
- Horns more triangular in cross-section, flare more widely from the head, and rarely "broomed" or broken at the tips compared to bighorn sheep and never show the dull, medium-brown coat colour.
- Rams stand 90 cm at the shoulder, weigh up to 110 kg, and have horns up to 122 cm from base to tip.
- Ewes' slender horns never get more than 25 cm.

Biology:

- Herd animal, uncommonly seen alone, although they can be widely scattered during summer.
- Rut, mid Nov – mid Dec. Lambs weighing 3-4 kg born late Apr-early June in traditional lambing areas.
- Lambs stay with mother until next spring.
- Diet grasses and grass like plants. In spring and early summer, eat newly sprouted willow and poplar leaves.
- Primary factor limiting population and growth is forage (amount, quality).
- Virtually all fat reserves used to survive winter shortages.
- Reproduction is tightly related to nutrition in their short growing season locale.



Photo Credit: [Hunters for BC](#)

Phenology:

					Yearlings	Leave						
					Birth	Nursing		Wean	Breeding			
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	

Habitat:

- Alpine animals but venture into subalpine brushlands and lower forested areas.
- Occur in herds separated by landforms such as plateaus or forested valleys.
- Summer ranges at remote higher elevations with graminoid forage, variety of forbs, and low shrubs, near escape terrain.
- After rut, all sex and age classes found on localized winter range; can be lambing area, lower in elevation, drier, and windswept (exposes forage).
- Enter forest edges in winter but find most forage in adjacent open areas. Short legs – hard to cope with deep snow.
- Lambing habitat has escape terrain – steep rugged cliffs or rock outcrops.
- Travel several km in spring – early summer to access mineral licks.

Stone's Sheep (*Ovis dalli stonei*)



Field Action Required:

- If observed, stop work in the immediate area until a biologist with experience with Stone's Sheep surveys the area.
- Take photos and record sighting's coordinates.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: Not Listed.
- Provincial List: Blue.
- Identified Wildlife: Yes

BEC Zones:

- BAFA, BWBS, ESSF; SWB.

Natural Resource District:

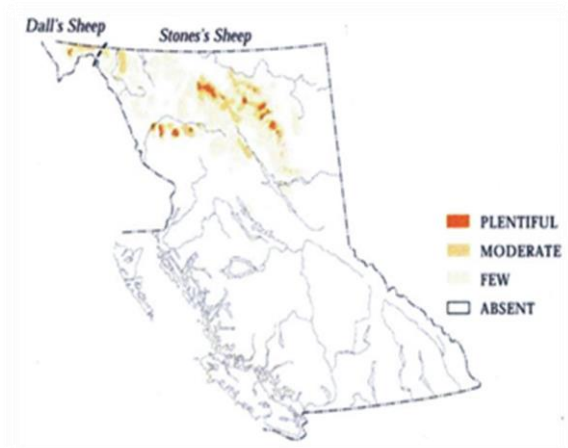
- Coast Mountain, Fort Nelson, Mackenzie, Peace, Skeena Stikine.

Range:

- Occur in mountain ranges from Williston Lake north and west to Atlin-Tatshenshini area.
- Dall's sheep (*O. d. dalli*) restricted to extreme northwest where St. Elias Mountains extend into British Columbia.
- Stone's and bighorn sheep ranges do not overlap.



Photo Credit: [iNaturalist](#)



Map Credit: [BC Ministry Environment Lands & Parks](#)

Western Screech-Owl, *macfarlanei* (*Megascops kennicottii macfarlanei*)



Description:

- Two distinct subspecies in British Columbia, the *macfarlanei* in the valleys of the southern interior and the *kennicottii* along the Pacific coast.
- A small sized owl, 19-25 cm long.
- Grey-brown owl with feather “ear” tufts and yellow eyes.
- The head is crowned with a triangular russet and black cap that follows the eyebrow ridge to the ear tufts.
- Breast and belly are pale with dark vertical streaking.
- The coastal subspecies tends to have greater brown colouration while the interior subspecies is greyer.
- Females tend to be larger than males.



Photo Credit: [inaturalist](#)

Biology:

- Diet consists of small mammals, including mice, voles, insects, amphibians, and small fish.
- A nocturnal predator.
- A cavity nester that often nests in abandoned cavities of the Northern Flicker or Pileated Woodpecker
- Nest in large diameter deciduous trees, Black Cottonwood, Aspen, Bigleaf Maple and Birch.
- Two to seven white eggs, usually one brood.
- Eggs are incubated by females for 21-30 days.
- Fledging leave nest 28-36 days after hatching.
- Monogamous pairs.

Habitat:

- The Western Screech-Owl is found in almost every type of low elevation woodland habitat, including coniferous and deciduous forests and suburban gardens, most often near streams or in riparian habitats.
- The key is availability of suitable roosting cover and nest sites.
- They will use nest boxes if no suitable tree cavities exist.

Phenology:

		Nesting			Fledging						
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Western Screech-Owl, *macfarlanei* (*Megascops kennicottii macfarlanei*)



Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- BG, ICH, IDF, PP.

Natural Resource District:

- Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap.

Vocalization:

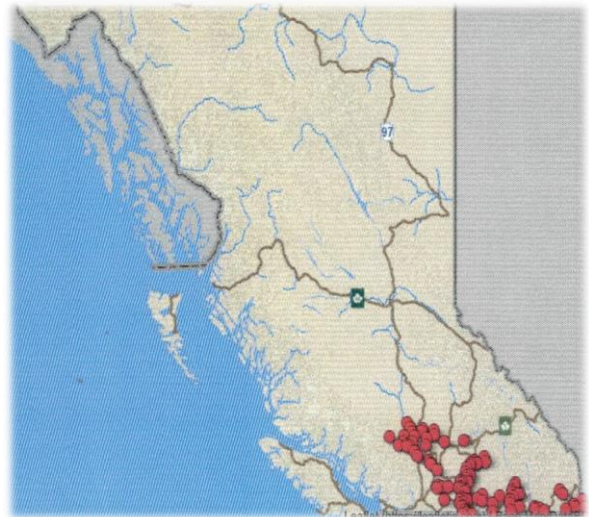
- https://www.allaboutbirds.org/guide/Western_Screech-Owl/sounds

Range:

- Western Screech-Owl *macfarlanei* subspecies occurs in low elevations of southern valleys of the interior of British Columbia.
- The *macfarlanei* subspecies is more or less confined to linear riparian habitats along creeks in the interior of British Columbia.



Photo Credit:[inaturalist](#)



Map Credit:[CDC](#)

Western Toad (*Anaxyrus boreas*)

Description:

- Skin is dry granular with bumpy warts, colouration can be light to dark green to brown or even reddish.
- Distinguished by cream-coloured or white vertebral stripe running down the length of the back.
- Oval-shaped parotid glands, horizontal pupils.
- Underside is pale and coarsely mottled.
- Hind feet have two horny nodules for digging.
- Females, up to 125mm, are slightly larger than males, up to 110mm, total length.



Photo Credit: Glynnis Maundrell

Biology:

- Diet consists of worms, slugs and small insects.
- Hibernate during winter, the length of hibernation depending on the climatic and seasonal conditions. Typically, between late September and March or April.
- Hibernation is below the frost line in small mammal burrows, crevices, and can be in easily excavated substrate, such as mud and sand.
- Breeding takes place in shallow water of ponds and lakes.
- The female lays between 3000 to 12000 eggs in two long strings. Eggs are black, surrounded by a clear jelly sac. Eggs hatch in 4-12 days, and the tadpoles develop into juvenile toads within 12 weeks.
- Can travel several kilometers between breeding and summer and hibernation sites.
- Toads are often on roads in the spring and fall hunting or migrating to and from breeding and hibernation grounds.

Habitat:

- Western Toads are found in forest, wetlands, grassland, meadows, shrub lands, or subalpine or alpine meadows and dry habitats.
- Usually not far from water.
- Can be found thermoregulating in open areas, but also under structures for protection.

Field Action Required:

- If a Western Toad migration route or breeding area is observed stop work in the immediate area until biologist experienced in Western Toad can survey the area. Work in an adjacent area.
- If field crews believe a Western Toad breeding area exists take photos and locate with GPS waypoint if possible. Report to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Phenology:

Hibernation			Breeding			Hibernation					
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Western Toad (*Anaxyrus boreas*)

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Yellow.
- Identified Wildlife: Yes.

BEC Zones:

- BG, BWBS, CDF, CWH, ESSF, ICH, IDF, PP, SBS, SWB.

Natural Resource District:

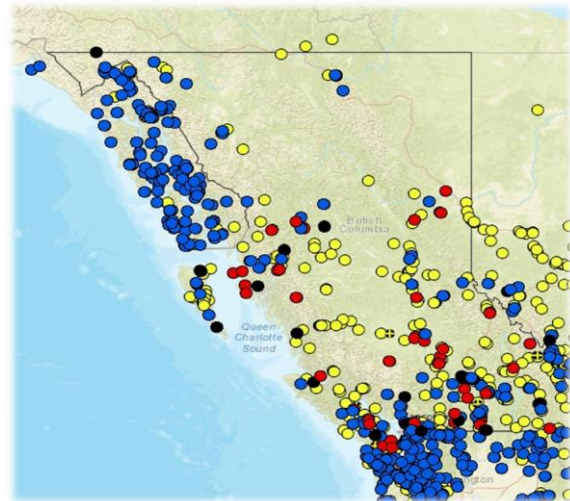
- Mackenzie, Prince George, Nadina, Skeena, Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountains, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, North Island – Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako.

Vocalization:

- [Breeding call](#). Not all populations call.



Photo Credit: [Whatfrogs](#)



Map Credit: Efauna.



Photo Credit: C. Maundrell

Range:

- Western Toads are found throughout British Columbia.
- Found from low to high elevations.
- Current inventory data is lacking for the far Northeast corner of British Columbia.

Whitebark Pine (*Pinus albicaulis*)

Description:

- Whitebark Pine is usually found at high elevations in the mountain ranges of British Columbia.
- This species occurs in relatively high numbers of individuals over a moderately large range extent in subalpine regions but is highly threatened by mountain pine beetle and white pine blister rust epidemics, climatic warming trends, and successional replacement.
- Whitebark Pine grows up to 20 m in height, but is also often contorted and dwarfed, 5-10 m tall, or a shrubby sprawling timberline tree.
- It has thin bark with light-whitish scales and hairy young twigs.
- The needles are in bunches of five, clustered towards ends of branches, 4-7 cm long and yellow green in colour.
- Seed cones are egg-shaped, deep red to purple, 5-8 cm long.
- The seeds are large, wingless, and nutrient rich.
- The pollen cones are red.
- Whitebark Pines are long lived and can survive over 1,000 years.
- At high elevations, krummholz whitebark pine communities merge into alpine vegetation. At mid-elevation, whitebark pine communities merge into mixed-conifer forests.

Biology:

- The scales of the cone remain closed and shed the seeds slowly, rarely falling from tree intact.
- Whitebark Pine is not adapted for wind dissemination and is almost entirely dependent on Clark's nutcracker (*Nucifraga columbiana*) for successful dispersal and reproduction.
- These birds have been observed traveling anywhere from several hundred meters to over 10 km to cache seeds.
- Various mammals (red squirrel, black bear, grizzly bear, chipmunk, golden-mantled ground squirrel, deer mice) also

transport and cache seeds but not nearly to the extent of the Clark's nutcracker.

- Trees do not reach full cone production until 60 to 100 years of age on most sites.
- Peak cone production extends for another 250 years, then gradually declines.
- Pollen is shed in early to mid-summer.
- Gene flow is facilitated by wind dispersal of pollen and bird dispersal of seed.

Phenology:

						Flower					
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

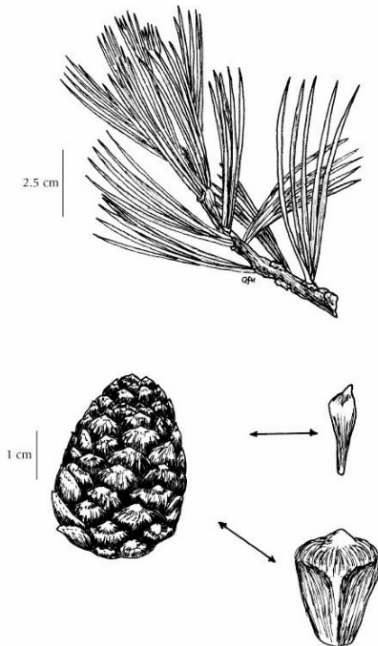


Photo credit: [iNaturalist](https://www.iNaturalist.org/)

Habitat:

- Whitebark Pine occurs within montane forests and on thin, rocky, cold soils at or near timberline at 1,300-3,700 m which lack fine material.
- In moist mountain ranges, it can be found at lower elevations (900-1100m) on warm, dry exposures; but in semiarid ranges, it becomes prevalent on cool exposures and moist sites.

Whitebark Pine (*Pinus albicaulis*)



Credit: [The Illustrated Flora of British Columbia](#)

Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.

Management Recommendations:

- Follow management recommendation from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1-Endangered (2012)
- Provincial List: Blue
- Identified Wildlife: No



Photo credit: [E-Flora BC](#)

BEC Zones:

- ESSF: mvp, mw, mwp, mww, vc, vcp, vcw, wc, wcp, wcw, wk, wm, wmp, wmw, ww, wvp, xc, xcp, xcw, xv, xvp, xvw
- ICH: dm, dw, mc, mk, mm, mw, vk, wk
- IDF: dc, dk, dm, dw, ww, xc, xh
- IMA: un, unp
- MH mm, mmp, dc, dk, dm, dv, mw, xk, xv
- SBPS: xc
- SBS: dh, mc, vk, wk
- BAFA: un, unp
- CMA: unp
- CWH: dm, ds, ms, un, vm, ws

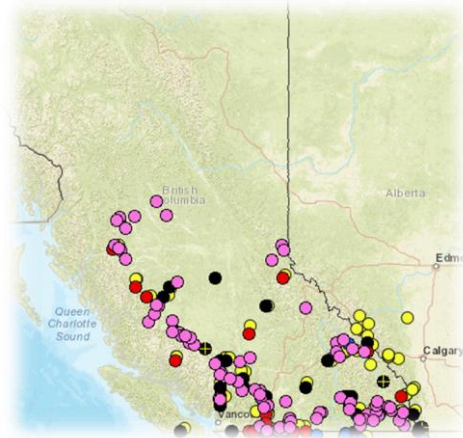
Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Mackenzie, Prince George, Coast Mountains, Stuart Nechako

Whitebark Pine (*Pinus albicaulis*)

Range:

- Whitebark Pine occurs in subalpine and timberline zones from west-central British Columbia east to west-central Alberta.
- South to central Idaho, southwestern Wyoming, and southern California.



Map Credit: [E-Flora BC](#)

Wolverine (*Gulo gulo luscus*)

Description:

- Medium-sized carnivore and largest terrestrial member of weasel family in North America.
- Bearlike with massive limbs and long, dense, dark brown pelage, paler on head, with two broad yellowish stripes extending from shoulders and joining on rump, bushy tail, and relatively large feet.
- Large head, broad forehead, short stout neck, short legs, and heavy musculature.
- 650-1125 mm long with tail of 170-260 mm, and weight 12-18 kg.
- Females average 10% less than males in linear measurements and 30% less in weight.



Photo Credit: [iNaturalist](#)

Biology:

- Females den at higher elevations under rocks, logs, or snow.
- Breed late Apr-early Sep but embryos do not implant until Jan.
- Kits born late Feb- mid Apr, nursed for 2 months and then leave den. Stay with mother for first winter.
- Kits adult size in 7 months.
- Scavengers and predators.
- Diet: large ungulates (moose, elk, deer, caribou, and mountain goats) primarily as carrion.
- Also eat hares, porcupines, squirrels, mice, voles, birds, fish, and vegetation.
- Cache food they have scavenged.
- Predators: bears, wolves, cougars, golden eagles, and other wolverines.

Habitat:

- Avoid dry grassland areas and are rare on BC coast.
- Best described as anywhere with an adequate year-round food supply in large, sparsely inhabited wilderness areas, rather than in terms of types of topography or plants.
- Treed and treeless ecological areas, at all elevations. Low elevation used in winter.
- Most abundant where large ungulates are common, and where carrion is plentiful in winter.
- Home range, 50-400 km² for females and 230-1580 km² for males.
- Juveniles may have even larger ranges and can disperse over 300 km.
- High density in BC mountains.
- Negatively affected by human activity and habitat alteration.
- Reluctant to cross active transportation corridors, barrier to movement and mortality driver.

Phenology:

			Breeding Period								
impla	Birth		Care								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Wolverine (*Gulo gulo luscus*)



Photo Credit: [Schools Wikipedia](#)

Field Action Required:

- If animal or den observed, stop work in the immediate area until a biologist with experience doing wolverine surveys assesses the area.
- Take photos and record sighting's coordinates.
- Report the observation to supervisor and contact BCTS.

Management Recommendations:

- Follow management recommendations from BMP for species or consult a qualified professional if no BMP exists.

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

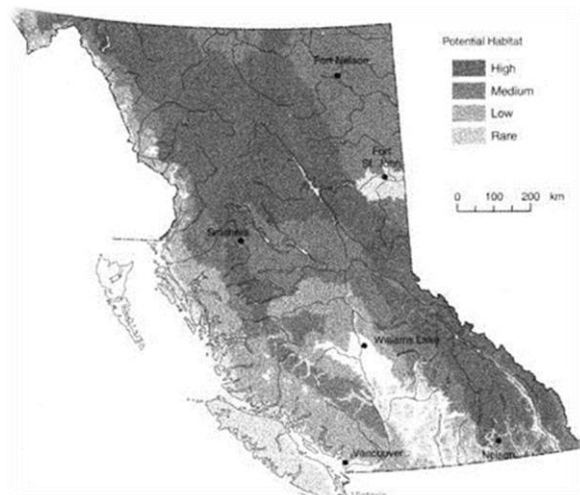
- BAFA, BWBS, CMA, CWH, ESSF, ICH, IDF, IMA, MH, MS, SBPS, SBS, SWB.

Natural Resource District:

- Nadina, Skeena Stikine, Quesnel, Cariboo-Chilcotin, Chilliwack, Sea to Sky, Sunshine Coast, Haida Gwaii, Thompson Rivers, 100 Mile House, Cascades, Rocky Mountain, Selkirk, Okanagan Shuswap, Fort Nelson, Peace, Mackenzie, Prince George, North Island - Central Coast, Coast Mountains, Campbell River, South Island, Stuart Nechako

Range:

- Found in remote areas of undisturbed wilderness throughout BC.
- Occur in many northern and mountain parks in BC.
- Possibly extirpated on Vancouver Island, lower Fraser Valley, Okanagan Basin, and Thompson Basin.



Map Credit: [BC Ministry of Environment](#)